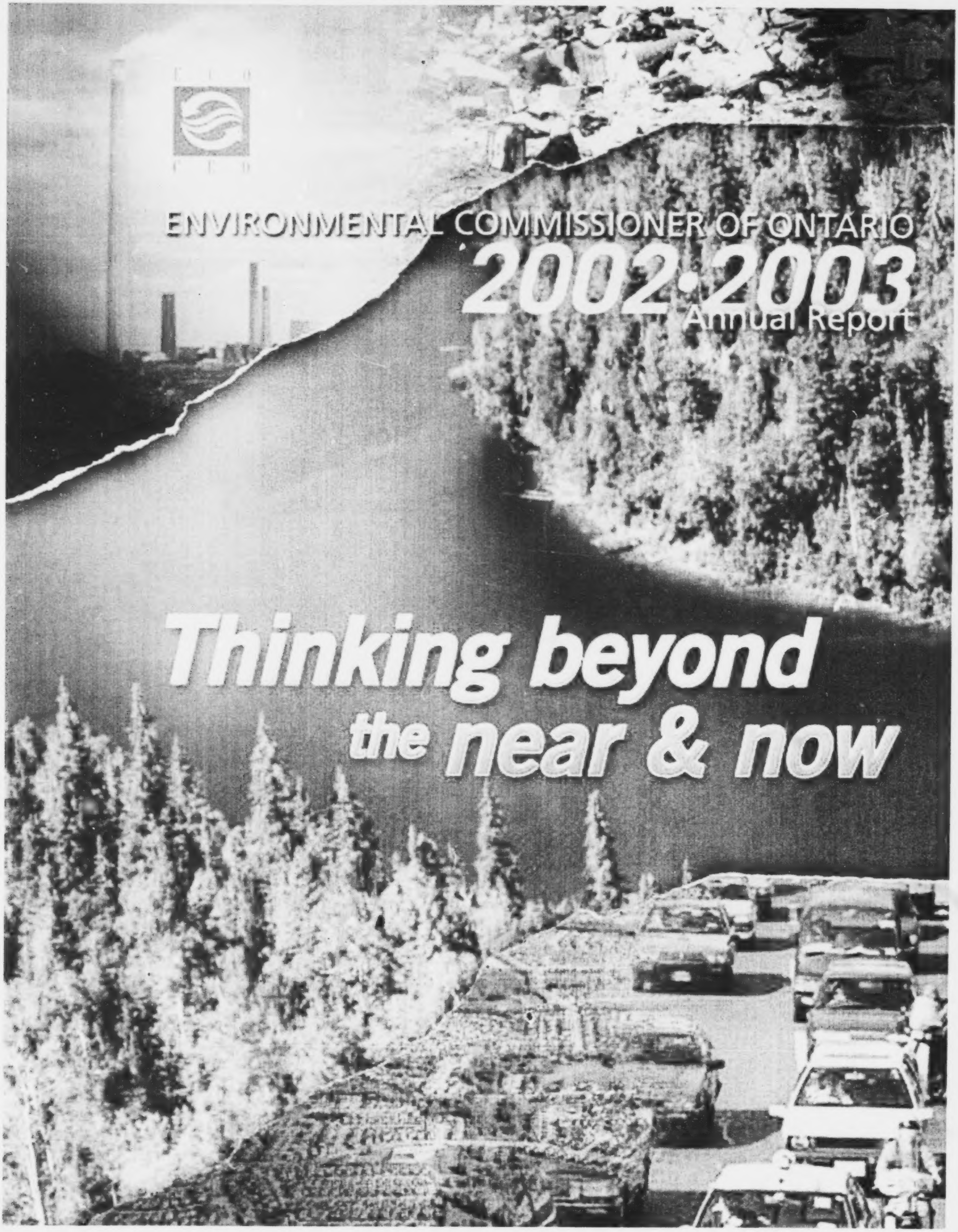

ENVIRONMENTAL COMMISSIONER OF ONTARIO

2002·2003
Annual Report

Thinking beyond the near & now

Because we don't think about future generations, they will never forget us.

–Henrik Tikkanen

104-01084/

Environmental
Commissioner
of Ontario

Commissaire à
l'environnement
de l'Ontario

Gord Miller, B.Sc., M.Sc.
Commissioner

Gord Miller, B.Sc., M.Sc.
Commissaire

November 2003

Speaker of the Legislative Assembly
Room 180, Legislative Building
Legislative Assembly
Province of Ontario
Queen's Park

Dear Mr. Speaker:

In accordance with Section 58 of the *Environmental Bill of Rights, 1993*, I am pleased to present the 2002/2003 annual report of the Environmental Commissioner of Ontario for your submission to the Legislative Assembly of Ontario.

Sincerely,

G Miller

Gord Miller
Environmental Commissioner of Ontario

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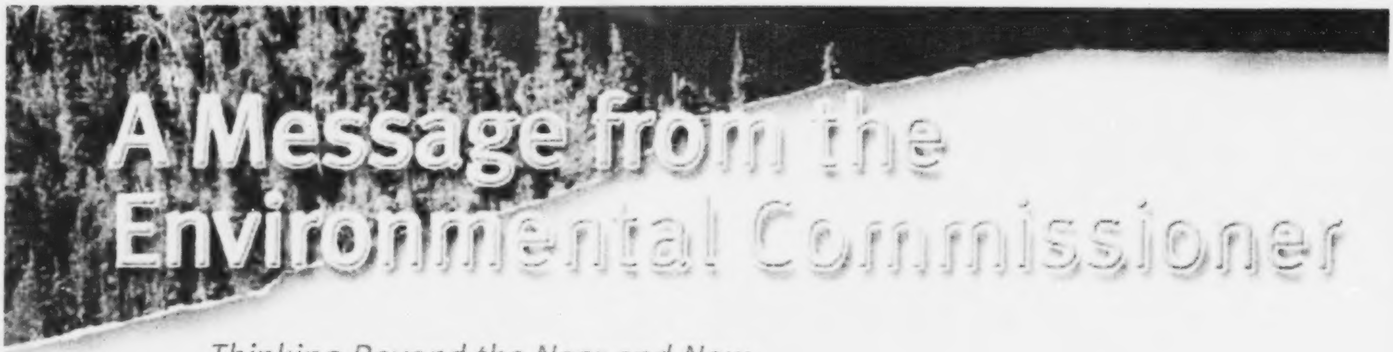
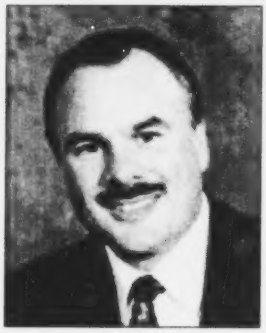
Glossary: See the ECO Web site at www.eco.on.ca



A Message from the Environmental Commissioner

Thinking Beyond the Near and Now



When did we become so focused on the present moment and our immediate situation? It seems to me there was a time not so long ago when we were focused as a society on building a better future for our children and our grandchildren. We had a broader sense of the connections between the landscape, the communities of Ontario and the economy — the cement kilns of Lake Ontario, the paper mills of the north, the grain elevators of Thunder Bay, and the salt mines of Windsor. And we valued that. We worked for a better tomorrow, but at the same time we didn't forget about the past, about those who had made sacrifices and worked hard to create the opportunities we enjoyed.

Somehow that awareness of the past and concern about what the future might become seem to be missing from current public discourse and decision-making. In the same way, there is little concern about how other areas of the province are impacted by decisions made in the urban centres. We accept as inevitable that the population of the GTA will continue to swell by 100,000 new residents every year. Yet, have we really come to grips with what that will mean for our remaining forests, watercourses, air quality, and our most productive agricultural land? Do we care about our countryside?

Alas, life moves too quickly to linger on such considerations. We must grow at an expanding rate. We can't worry about those things now. Approve those subdivisions — they're needed now. Build more highways — otherwise we can't get to work. Just get the garbage to Michigan — and make sure it's nowhere near us. Do something now about that new crisis in this morning's newspaper.

It's rather like speeding down a dark northern Ontario highway on a moonless June night with only your low beams on. You have that confident, comfortable feeling because there is no one on the road and you're making good time. But if you just click on your high beams you'll see the moose standing there only a few seconds in front of you. (I realize that such imagery may have little resonance with many Ontarians from the south who may not relate to this scenario, but let me assure you that such incidents make a profound impression on those of us who have experienced them.)

The analogy of a speeding car works quite well in a discussion about the "near and now," because as most drivers know, we have a tendency to focus on objects and surroundings just in front of the car. It takes training and discipline to bring your eyes up to the distant horizon where you become aware of events and objects far ahead — in both time and space. But only then can you acquire the capacity to anticipate, plan and react to future hazards. And so it is with public decision-making that affects the environment. We all must keep our eyes on the horizon.

Too often of late we are staring at the hood ornament as we plunge down the roadway toward an unknown future. We mine aggregates from the Niagara Escarpment for concrete and road building at an accelerating rate. Yet we dump broken concrete and other inert fill into Lake Ontario to extend Toronto's Leslie St. Spit without thinking of using them in building roads. We think we can't afford to upgrade our sewage treatment systems, yet we lament the degradation of our streams and beaches. And notwithstanding the progress made with the Oak Ridges Moraine Conservation Plan, our land use planning legislation still doesn't recognize the necessity of planning on the basis of watersheds and protecting our drinking water sources.

Sometimes we seem to be on that northern highway with our headlights turned off completely. We don't measure or monitor the continuing loss of deciduous forests in southern Ontario, we have no provincial program to replant trees on the private lands of the south, and in many cases we do not even have the seeds to plant native trees if we wanted to. We stand by impotently as exotic species after exotic species invade, disrupt and in some cases replace our ecosystems. We have no overall strategy to protect our biodiversity.

It is true there are some signs that our view of time and space may be broadening again. Various provincial ministries have recently turned their attention to some of these issues — witness the government's Smart Growth initiative and the report of the Advisory Committee on Watershed-Based Source Protection. And Smart Growth is forward-looking. But at this point Smart Growth is only a collection of well-meaning plans and ideas. The true test of that initiative will come with its implementation in the coming years.

To succeed, all of us, not just government, will have to think beyond those matters near to us, close at hand. We have to consider and support initiatives that are in the interests of the broader natural environment of Ontario ... not just now, in the short term, to improve our lot, but over the long term for the benefit of future generations.

There is a well-worn couplet that captures the essence of the interrelationships of humans and ecosystems across the vast spaces of the globe. It exhorts us to think beyond the near. Perhaps it needs some additional lines to complete the stanza and remind us to think beyond the now ...

Think Globally,
Act Locally.
Think about Tomorrow,
Act Today

Gord Miller
Environmental Commissioner of Ontario

Part 1:

The *Environmental Bill of Rights*

The *Environmental Bill of Rights (EBR)* gives the people of Ontario the right to participate in ministry decisions that affect the environment. The *EBR* helps to make ministries accountable for their environmental decisions, and ensures that these decisions are made in accordance with goals all Ontarians hold in common — to protect, conserve, and restore the natural environment for present and future generations. The provincial government has the primary responsibility for achieving these goals, but the people of Ontario now have the means to ensure they are achieved in a timely, effective, open and fair manner.

The *EBR* gives Ontarians the right to . . .

- comment on environmentally significant ministry proposals.
- ask a ministry to review a law or policy.
- ask a ministry to investigate alleged harm to the environment.
- appeal certain ministry decisions.
- take court action to prevent environmental harm.

Statements of Environmental Values

Each of the ministries subject to the *EBR* has a Statement of Environmental Values (SEV). The SEV guides the minister and ministry staff when they make decisions that might affect the environment.

Each SEV should explain how the ministry will consider the environment when it makes an environmentally significant decision, and how environmental values will be integrated with social, economic and scientific considerations. Each minister makes commitments in the ministry's SEV that are specific to the work of that particular ministry.

The Environmental Commissioner and the ECO Annual Report

The Environmental Commissioner of Ontario (ECO) is an independent officer of the Legislative Assembly and is appointed for a five-year term. The Commissioner reports annually to the Legislative Assembly — not to the governing party or to provincial ministries.

In the annual reports to the Ontario Legislature, the Environmental Commissioner reviews and reports on the government's compliance with the *EBR*. The ECO and staff carefully review how ministers exercised discretion and carried out their responsibilities during the year in relation to the *EBR*, and whether ministry staff complied with the procedural and technical requirements of the law. The actions and decisions of provincial ministers are monitored to see whether they are consistent with the ministries' Statements of Environmental Values (see pages 8-9).

Part 2 of this annual report reviews the use of the Environmental Registry by prescribed ministries, evaluating the quality of the information ministries post on the Registry and whether the public's participation rights under the *EBR* have been respected. In Part 3, Significant Issues, the ECO highlights a number of important issues that have been the subject of recent applications under the *EBR* or are related to recent decisions posted on the Environmental Registry. In Part 4, Ministry Environmental Decisions, the Environmental Commissioner and ECO staff assess how ministries used public input to draft new environmental Acts, regulations and policies. In Part 5, Reviews and Investigations, the ECO reviews how ministries investigate alleged violations of Ontario's environmental laws and whether applications from the public requesting ministry action on environmental matters were handled appropriately. Part 6, Appeals, Lawsuits and Whistleblowers, deals with appeals and court actions under the *EBR*, as well as the use of *EBR* procedures to protect employees who experience reprisals for "whistleblowing."

In Part 7, Ministry Progress, ECO staff follow up on the progress made by prescribed ministries in implementing recommendations made in previous annual reports. Part 8, Developing Issues, draws attention to a number of issues that the ECO and staff believe deserve stronger and more focused attention from Ontario ministries.

Ministries Prescribed Under the EBR

Agriculture and Food	(OMAF)
Consumer and Business Services	(MCBS)
Culture	(MCL)
Enterprise, Opportunity and Innovation	(MEOI)
Energy	(ENG)
Environment	(MOE)
Health and Long-Term Care	(MOHLTC)
Labour	(MOL)
Management Board Secretariat	(MBS)
Municipal Affairs and Housing	(MAH)
Natural Resources	(MNR)
Northern Development and Mines	(MNDM)
Tourism and Recreation	(MTR)
Transportation	(MTO)

Ministry Statements of Environmental Values

Every ministry prescribed under the *Environmental Bill of Rights* is required to develop a Statement of Environmental Values (SEV). The SEV outlines how the ministry applies the purposes of the *EBR* in its environmental decision-making, and how it considers these purposes along with social, economic, scientific and other considerations. The SEVs are to be considered whenever environmentally significant decisions are made in a ministry, and the ECO is required to report annually on how well a ministry's decision-making complies with its SEV.

The ECO and others have criticized some SEVs because they are vague, and few ministries have translated their general principles into specific SEV commitments. This has made it hard for the ECO to monitor ministry compliance with SEVs. The ECO has reported in past annual reports that most ministries have failed either to incorporate environmental values into their Business Plans or insert more than a passing reference to SEV commitments. Application of the SEVs also varies widely between ministries. Finally, most SEVs were developed in 1994, and only three ministries updated their SEVs between 1995 and June 2003. One updated SEV was not an improvement.

In January 2002, the ECO asked all prescribed ministries a number of SEV-related questions, including whether ministries were planning to review or update them. In March 2002, most ministries responded that they were planning to review their SEVs in the near future, acknowledging that they had become dated. Later the Ministry of the Environment informed the ECO that it planned to lead a broader review across *EBR* ministries, aiming to have the SEVs reflect a government-wide vision, and to respond to some of the concerns raised by the ECO.

In March 2003, MOE informed the ECO that it had just received multi-ministry approval to proceed with a three-phase SEV revision project. MOE said that the first phase would be to have most SEVs revised to realign with the current mandates and core businesses of *EBR* ministries. The revised SEVs would then be posted on the Environmental Registry in the summer of 2003. The second phase would be to develop a process to enable more consistent application of SEVs among the ministries. The third phase would be to continue discussions across ministries regarding the need for further reform in the long term. MOE said that ministries are committed to using the Environmental Registry process to consult with the public on improved SEVs in the coming fiscal year.

The ministries' review has gotten off to a slow start, but appears to be back on track. The ECO encourages the ministries to carry out the coordinated public review as planned. We will report on progress in the next annual report.
(For ministry comments, see page 203.)

Instruments

What are instruments?

Instruments are legal documents that Ontario ministries issue to companies and individuals granting them permission to undertake activities that may adversely affect the environment, such as discharging pollution into the air, taking large quantities of water, or mining for aggregates. Instruments include licences, Orders, permits and certificates of approval.

Classifying Instruments

Under the *Environmental Bill of Rights*, certain ministries must classify the instruments they issue into one of three classes according to how environmentally significant they are. A ministry's instrument classification regulation is important for Ontario residents wishing to exercise their rights under the *EBR*. The classification of an instrument determines whether a proposal to grant a license or approval will be posted on the Environmental Registry. It also determines the level of opportunity for public participation in the decision-making process, whether through making comments or applying for appeals, reviews or investigations under the *EBR*. If instruments are not classified, they are not subject to the *EBR* notice and comment provisions, the public cannot seek leave to appeal when they are issued, nor request a review of an instrument or an investigation into allegations regarding violations of an instrument.

Ensuring Public Comments are Considered

In relation to three separate Ministry of the Environment instruments, it came to the attention of the Environmental Commissioner again this year that comments submitted on Registry proposal notices were not acknowledged in the ministry's decision notices. As of March 2003, the ECO had not received responses to our inquiries of MOE concerning whether or not these comments were considered in making the decisions. Ministries must ensure that all comments received in response to proposals on the Registry are considered and noted in the decision notice.

Cataraqui Region Conservation Authority Land Disposition

In May 2002, the Ministry of Natural Resources posted an exception notice about a proposed disposition of Conservation Authority land by the Cataraqui Region Conservation Authority (CRCA) in Kingston. The Conservation Authority proposed to swap the land for other environmentally sensitive land with a developer who wished to build a new subdivision. Although ministry approval for this transaction has been classified as an instrument, MNR stated that it was excepted from notice and comment requirements under s. 32 of the *EBR* because it put into effect an undertaking that was exempted by a regulation under the *Environmental Assessment Act (EAA)*. According to MOE and MNR, the *EAA* exception applied because Regulation 334 under the *EAA* exempts the acquisition of land by an authority from the requirements of the *EAA* — and the disposition of this land is a "retirement" of the acquisition and so is also exempt under Regulation 334.

The ECO does not share MNR's interpretation of the "retirement" provision in Regulation 334. The exempted undertaking is the acquisition of Conservation Authority land, not the ongoing ownership of it, so disposition of the land should not be considered a "retirement." There is also a qualitative difference between acquiring Conservation Authority land, which will almost certainly have a beneficial impact on the environment, and disposing of it, which may have a negative impact. An exemption for disposing of Conservation Authority land from both *EAA* and *EBR* processes would be inconsistent with other requirements relating to provincially held land. Acquisitions and dispositions of government land by the Ontario Realty Corporation are treated as different undertakings under its Class Environmental Assessment, and MNR must meet environmental assessment requirements when it disposes of Crown land.

The ECO disagrees with MNR's decision not to post the Cataraqui Region Conservation Authority's land disposition as a regular proposal on the Environmental Registry. Although MNR did post an information notice and accept comments on land disposition, the public did not have the full notice and comment rights available to them under the *EBR*. The ECO recommends that, in the future, MNR post proposals for the disposition of Conservation Authority land as regular Registry notices.

Water Management Plans under the Lakes and Rivers Improvement Act

As a result of the passage of the *Reliable Energy and Consumer Protection Act, 2002*, the *Lakes and Rivers Improvement Act (LRIA)* was amended to allow the Minister of Natural Resources to order the owners of waterpower facilities to prepare or amend Water Management Plans to manage flows and levels of rivers. MNR planned to post these Orders on the Environmental Registry as information notices, despite the fact that similar Orders under the *LRIA*, relating to water levels of lakes or rivers where there are dams, are classified instruments. In January 2003, the ECO wrote to MNR requesting that these Orders be classified as instruments for the purposes of the *EBR*.

MNR responded in March 2003, stating that it would give serious consideration to the suggestion that Water Management Plans be classified as instruments under the *EBR*. MNR added that the authority to make a regulation to classify instruments rests with the Lieutenant Governor in Council, or Cabinet. The ECO urges MNR to begin the process of proposing to Cabinet that these instruments be classified.

Classifying Instruments under the Oak Ridges Moraine Conservation Act

In December 2001, the *Oak Ridges Moraine Conservation Act (ORMCA)* was passed. That same month, the ECO wrote to the Ministry of Municipal Affairs and Housing to request that it consider prescribing the *ORMCA* under the *EBR*. In March 2002, MAH responded with a commitment to prescribe the Act under the *EBR* to ensure that the public receives notice and has the opportunity to comment on regulations and instruments related to the *ORMCA*, and is able to make applications for review in relation to the Act.

As of March 2003, MAH was still in the process of prescribing the *ORMCA* under the *EBR*. The ministry intends to classify two instruments under the Act: Orders to amend an official plan or zoning by-law to conform to the Oak Ridges Moraine Conservation Plan; and approvals of official plan amendments and zoning by-law amendments that bring them into conformity with the Plan. There will be approximately 30 of these instruments in total, and they will likely need to be posted once only on the Environmental Registry. Unfortunately, most of these instruments will be issued before October 2003, and it is unlikely that the instruments will be formally prescribed under the *EBR* by that time. Therefore, MAH intends to post these instruments on the Registry as information notices with an opportunity for public comment.

Effect of Public Comments on Instruments

As part of our work, the ECO reviews ministry decision-making on selected instruments. In order to illustrate how the public is participating in government decision-making, one of the ECO's reviews is summarized below, showing that instrument proposals can evoke strong public interest.

Approval for a new Waste Disposal Site

In January 2001, MOE posted a proposal to approve the construction and operation of a new waste disposal site in southern Ontario to be used for transferring and processing non-hazardous solid waste from residential, industrial, commercial and institutional sources. The waste and recyclable material received at the site would primarily be construction and demolition debris such as concrete, asphalt shingles, paper fibre, metal, wood and drywall. Processing would involve sorting recyclable material from waste to be sent for final disposal. The proposed site was located within approximately 17 metres of a residential area. Given this close proximity, the municipality felt that dust and litter generated as a result of the facility's operations could have an adverse impact on the residential community. MOE's own procedures state that incompatible development, including residential, should not normally be located within 20 metres of even Class I industrial operations — which are operations that produce noise that is not audible off the property, infrequent dust or odour that is not intense, no ground-borne vibration and infrequent heavy truck movement. Even greater separation distances are recommended for classes of industrial operations with more serious adverse effects.

MOE received 334 comments in response to the Registry notice of this proposal, all opposing the new waste disposal site. Members of the community expressed concerns relating to noise, odour, traffic, vermin, air pollution, litter, safety, the appearance of the facility, and the handling of hazardous materials.

In response to public concerns, MOE required the company to revise its proposal substantially in order to address issues related to dust, litter, noise and added traffic. In June 2002, the ministry issued the certificate of approval, with conditions requiring the company to spray dust suppressant and equip fans with dust filters, inspect for litter daily, incorporate a vermin control program, reduce the hours of operation, prohibit outdoor loading and unloading of storage bins, conduct a noise assessment and mitigate noise impacts, and ensure the safety of the site. ***(For ministry comments, see page 203.)***

Recommendation 1

The ECO recommends that the Ministries of Natural Resources and Environment revisit their interpretation of the "retirement" provision in Regulation 334 under the Environmental Assessment Act, *and that MNR post future proposals concerning the disposition of Conservation Authority land as regular Registry notices.*

ECO Educational Initiatives

One of the key mandates of the Environmental Commissioner of Ontario is to provide education about the *Environmental Bill of Rights (EBR)* to the people of Ontario. This important part of the *EBR* ensures that Ontarians learn about their right to participate in a meaningful way in the province's environmental decision-making process. This year the ECO's long-standing education outreach program included presentations to more than 18,000 people and responses to over 1,600 direct inquiries. More than 15,000 copies of the ECO annual report were distributed in hardcopy and CD format, along with an equal number of other ECO publications. This represents a substantial increase from previous years and can be directly attributed to the ECO's commitment to a multi-faceted outreach strategy. This strategy includes participation in broad-based environmental events as well as making a concerted effort to reach all sectors of Ontario's diverse population. Integral to this strategy is the ECO's Web site (www.eco.on.ca), which has a wide range of information and contacts to ensure that all visitors can fully exercise their legislated environmental rights.

The Environmental Registry, which is the main window through which Ontarians may participate in environmental decision-making, continues to see strong growth in the average number of visitors each month.

The ECO continues to air the public service announcements (PSAs) that were produced last year. Together with our long-standing open invitation to Ontarians to have ECO staff speak to their groups, the PSAs have helped to generate new audiences interested in learning about their environmental rights and about the ECO. As always, we invite you to call us with questions, comments and requests for information, or for a speaker from our office (416-325-3377 or 1-800-701-6454).

The ECO Resource Centre

The Environmental Commissioner of Ontario's Resource Centre (RC) supports the research needs of ECO staff, and also provides environmental information to Ontario residents. The RC's Ontario-focused environmental collection is comprised of a substantial compilation of government documents and an extensive number of books. This unique collection is duplicated in no other library in the GTA, with the exception of the Legislative Assembly of Ontario Library, which is not open to the public.

Though the collection does not circulate outside the library, the RC is open to the public, and the list of approximately 5,000 documents is accessible through an online catalogue on the ECO's Web site. They include:

General/subject-specific books on a wide range of timely environmental topics
Ontario government publications
Federal government reports
International governmental and non-governmental publications
Corporate/government/ENGO annual reports
Environmental law and policy publications
100 journals
Reference works
Environmental management literature
All four daily Toronto newspapers
Legislative Assembly and Ministry of the Environment press clippings

The RC, staffed by one full-time librarian, is open to the public five days a week, from 9:30 a.m. to 5 p. m. The Resource Centre is located at:
1075 Bay Street, Suite 605: Toronto, ON M5S 2B1.

Tel: 416-325-0363; FAX: 416-325-3370

resource.centre@eco.on.ca

www.eco.on.ca/english/resouctr/index.htm

Part 2:

The Environmental Registry

The Environmental Registry is the main component of the public participation provisions of the *Environmental Bill of Rights*. The Registry is an Internet site where ministries are required to post environmentally significant proposals for policies, Acts, regulations and instruments. The public then has the opportunity to comment on these proposals before decisions are made. The ministries must consider these comments when they make their final decisions and explain how the comments affected the decisions. The Registry also provides a means for the public to inform themselves about appeals of instruments, court actions and other information about ministry decision-making. The Registry can be accessed at: www.ene.gov.on.ca/envision/env_reg/ebr/english/index.htm

Quality of Information

The Environmental Registry is only as good as the information it contains. The *EBR* sets out basic information requirements for notices that ministries post on the Registry. The ministries also have discretion on whether to include other information. Previous annual reports of the Environmental Commissioner of Ontario have recommended that in posting information on the Registry, ministries should use plain language and provide clear information about the purpose of the proposed decision and the context in which it is being considered. Ministries should clearly state how the decision differs from the proposal, if at all, and explain how all comments received were taken into account. All notices should provide a contact name, telephone and fax number, as well as hypertext links to supporting information whenever possible.

The ECO evaluates whether ministries have complied with their obligations under the *EBR* and exercised their discretion appropriately in posting information on the Registry. This ensures that ministries are held accountable for the quality of the information provided in Registry notices.

Comment Periods

The *EBR* requires that ministries provide residents of Ontario with at least 30 days to submit comments on proposals for environmentally significant decisions. Ministries have the discretion to provide longer comment periods, depending on the complexity and level of public interest in the proposal.

All proposal notices placed on the Registry in 2002/2003 were posted for at least 30 days, with the exception of one MOE instrument. MOE posted 24 out of 36 proposals for new policies, Acts or regulations for 45 days or more. The ECO commends MOE for posting almost every proposal notice for its policies for a 90-day comment period. MNR posted 12 out of 34 proposals for new policies, Acts or regulations for 45 days or more. In some instances, the ministries re-posted notices several times, thereby extending comment periods beyond 60 days.

The ECO reviewed all Registry notices for proposed policies, Acts and regulations to determine whether the ministries had provided sufficient comment periods according to the complexity of their proposals. This review determined that prescribed ministries were generally allotting an adequate period for comment. However, as illustrated below, ministries should have allowed for longer comment periods for the majority of proposals for Acts.

Adequate Time to Comment on Acts

The *Heritage Hunting and Fishing Act*, which was given Royal Assent in June 2002, is a noteworthy example of a proposal notice on the Environmental Registry with an insufficient comment period. This proposal was posted on the Registry for 30 days, receiving 6,335 comments before the deadline of the consultation period. The Ministry of Natural Resources was provided with comments from 55 different organizations. MNR states that it received over 24,000 comments in total, including those received after the deadline. This response suggests that MNR should have posted the proposal notice for a longer comment period on the Environmental Registry because of the extensive public interest. (For a detailed ECO review of this Act, see pages 151-154 in the Supplement to this report.)

In 2002, amendments to the *Lakes and Rivers Improvement Act*, introduced under Bill 58, were posted on the Registry for a 30-day comment period between May 30 and June 29. The proposal notice was posted one day after first reading of the bill in the legislature. The amendments received Royal Assent on June 27, thus making it difficult for MNR to take into account comments received in late June. This example highlights the need for ministries to do forward planning on new legislation to ensure there is adequate time for public comments through the Environmental Registry.

Description of Proposals

Ministries are required to provide a brief description of proposals posted on the Registry. The description should clearly explain the nature of the proposed action, the geographical location(s), and the potential impacts on the environment.

During this reporting period, descriptions of proposals for policies, Acts and regulations generally met the basic requirements of the *EBR*. The proposal notices provided brief and understandable explanations of the actions the ministries were proposing. However, ministries could still improve the contextual background information for their proposals, since many readers may not be familiar with environmental law and policy in Ontario.

The quality of descriptions for instrument proposal notices was again varied in 2002/2003. Prescribed ministries have taken steps toward providing better descriptions. However, improvements can still be made, particularly by MOE. The ECO also encourages the ministries to use plain language in their descriptions.

Access to Supporting Information

The majority of proposals for polices, Acts, and regulations posted on the Registry in 2002/2003 provided access to supporting information by listing a contact person, phone number and address. However, as observed in previous annual reports, many of MOE's instrument proposals failed to provide a contact name.

The vast majority of proposals had "hypertext" links to supporting information. Unfortunately, in many cases, users who tried to access the supporting material found that the link connected to a list of all government statutes and not directly to a specific document of interest.

Environmental Impacts

The ECO has expressed its concern in previous annual reports that ministries are not adequately explaining the environmental impacts of proposals. Although the *EBR* does not legally require ministries to include this information, it provides the public with the information necessary to make informed comments on proposals. In 2002/2003, all ministries consistently failed to provide an adequate explanation of potential environmental impacts in their proposal notices for policies, Acts, regulations, and instruments. Environmental impacts were typically explained only in regulations proposed by MNR and MOE.

Description of the Decision

Once a ministry has made a decision on a proposal posted on the Registry, the *EBR* requires the minister to provide notice of the decision as soon as possible. The description of the decision in a Registry notice lets residents of Ontario know the outcome of the public consultation process. Most descriptions of ministry decisions continue to be quite brief. Many simply stated that the decision was "to proceed with the proposal." In the interest of clarity and transparency, ministries should include the dates on which the decision was made and when it became effective, and the regulation number, if applicable.

Explaining How Public Comments were Addressed

The *EBR* requires the prescribed ministries to explain how public comments were taken into account in making a decision. Ministries should take the time and effort to summarize the comments, state whether the ministry made any changes as a result of each comment or group of related comments, and explain why or why not. Without this description, commenters will not know whether their comments were considered. In situations where there is a large number of comments, ministries should make an effort to summarize them appropriately and describe their effect on the decision.

Summary

The Environmental Registry usually provides the first point of contact for Ontario residents who want to participate in environmental decision-making. The Registry should be as user-friendly as possible. The recommendations contained in this and previous annual reports are intended to improve the quality of information on the Registry and to ensure that the public is able to participate fully in Ontario's environmental decision-making process.

Unposted Decisions

Under the *EBR*, prescribed ministries are required to post notices of environmentally significant proposals on the Environmental Registry for public comment. When it comes to the attention of the Environmental Commissioner that ministries have not posted such proposals on the Registry, we review that decision to determine whether the public's participation rights under the *EBR* have been respected.

The ECO's inquiries of ministries on "unposted decisions" can lead to one of several outcomes. In some cases, the ministry responsible provides the ECO with legitimate reasons for not posting the decision on the Registry. For example, the decision may not be environmentally significant, it may have been made by a related non-prescribed agency instead of the ministry itself, or it may fall within one of the exceptions allowed by the *EBR*. In other cases, the ministry subsequently posts a notice on the Registry under sections 15, 16 or 22 of the *EBR*. Finally, in certain cases, the decision may remain unposted, with the ECO disagreeing with the ministry's position that the particular decision does not meet the posting requirements of the legislation. An instance of an unposted decision from 2002/2003 is MOE's Selected Target for Air Compliance program. (Pages 1-5 of the Supplement to this report contain more information on the ECO's tracking of unposted decisions.)

Ongoing Monitoring for Potential Unposted Decisions

Monitoring ministry activities helps the ECO to stay on top of important environmental developments and, when necessary, to remind the ministries of their obligation to post environmentally significant proposals on the Registry for public comment. The following examples show the outcome of the ECO's tracking efforts.

Energy Initiatives

In a series of news releases and backgrounders issued between October 2002 and January 2003, the Ministry of Energy (ENG) announced a number of energy-related initiatives that the government is undertaking or planning to undertake. None of these initiatives were posted on the Registry at the time. The initiatives include: (1) a proposal to raise the threshold for the environmental approvals exemption for clean generation to 100 MW; (2) a proposal to establish a Renewable Portfolio Standard (RPS) for Ontario; and (3) a variety of government greening initiatives, including those to reduce electricity consumption, increase the procurement of renewable energy and enhance the energy efficiency of government buildings. At least three ministries are involved in the initiatives outlined above.

Ministry of Energy

In response to ECO inquiries, ENG informed the ECO that MOE is responsible for the environmental approvals revision and that MBS is handling the government greening initiatives. ENG stated that the Parliamentary Assistant to the Minister of Energy would be consulting with stakeholders prior to developing the new RPS. In order to create the RPS, new legislation would be required. ENG indicated that the proposed new Act would likely be posted on the Registry, and that it intended to be liberal in posting notices of its other new energy-related initiatives.

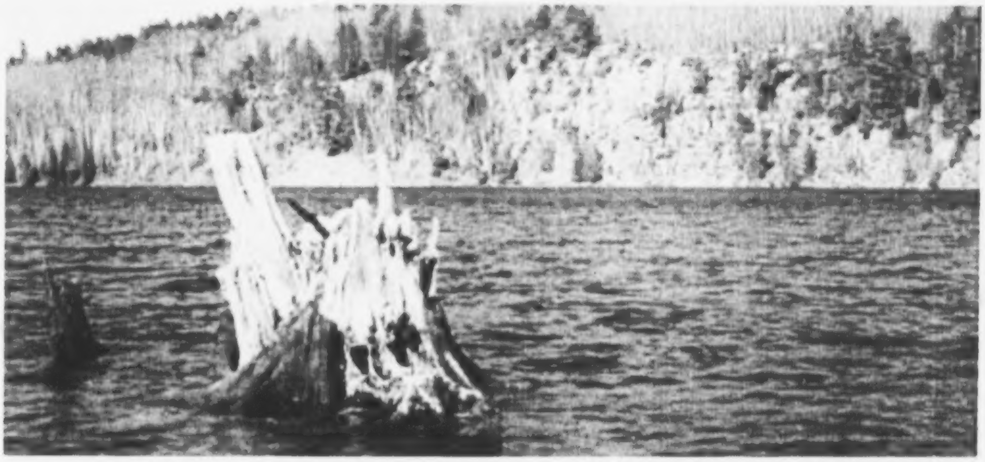
Management Board Secretariat

In March 2003, MBS sent the ECO a letter that provided a detailed response to the ECO's inquiries about the government's greening initiatives. The ministry stated that ENG is leading policy development with respect to both the electricity consumption and energy procurement initiatives. MBS is involved in developing the action plan for the former initiative and is working with ENG to develop and implement the latter one. MBS has assumed the lead on the building-related initiative, in co-operation with the Ontario Realty Corporation and other ministries. MBS conveyed that all three of the initiatives were in the planning phase at the time of writing. However, MBS did commit to seeking advice from senior management about posting notices for the electricity consumption (ENG and MBS) and procurement (ENG) initiatives on the Registry once planning is complete.

Ministry of the Environment

The ECO contacted MOE twice in 2003 (in February and April) regarding the proposal to raise the threshold for the environmental approvals exemption for clean generation. The ECO is still awaiting a response from MOE (as of May 8).

The ECO urges ENG, MBS and MOE to post proposals for all of the energy-related initiatives in which they are involved, including the new RPS legislation and the government greening initiatives, once planning is complete and before the initiatives are implemented.



Environmentally Significant Unposted Decisions

Selected Targets for Air Compliance (STAC) Program

In November 2002, the ECO became aware of MOE's new Selected Targets for Air Compliance (STAC) program. The STAC program audits how well major facilities comply with Point of Impingement (POI) air standards in Regulation 346 of the *Environmental Protection Act*, targeting a number of facilities in key sectors. The intent of the program is to ensure that neighbouring communities are not exposed to exceedances of regulated air contaminants. The program first started as a pilot project in 1997/1998 and has more recently become a formalized program. MOE did not use the Registry to inform the public of STAC or to consult on the program prior to the implementation of either the pilot or the formalized program.

In December 2002, the ECO wrote to MOE to indicate that, given the environmental significance of the program, it believed the ministry should have posted notice of STAC on the Registry for comment. The letter stated that the ECO believes that the program is a very positive step toward improving the compliance of major facilities with Point of Impingement air standards. Section 15 (1) of the *EBR* requires a minister to do everything in his or her power to give notice of a proposed environmentally significant Act or policy to the public at least 30 days before the proposal is implemented. The *EBR* also states: "policy means a program, plan or objective...." Programs that have positive environmental impacts are also environmentally significant.

In its response in May 2003, MOE stated that it disagrees that the program should have been posted on the Registry, saying that "... STAC is not based on any new policy or regulatory authority, as STAC requests are made under the authority granted to Provincial Officers in section 156 of the *Environmental Protection Act*. As such, when the pilot program was implemented, a determination was made that the program was predominantly administrative in nature, supplements compliance activities and is not subject to the notice and comment requirements of the *EBR*, in accordance with subsection 15(2)."

The ECO finds MOE's explanation misleading and continues to hold that the program should have been posted on the Registry for comment. It is the ECO's understanding that the assessment and modeling work the program entails would involve engineering and technical MOE staff, most of whom are not Provincial Officers. The ECO continues to believe that the program is environmentally significant — the ministry has reported that about 90 per cent of the facilities audited to date had never checked whether they were complying with Regulation 346, and that about 40 per cent of those facilities audited were not complying with POI standards. *(For ministry comments, see page 203.)*

Information Notices

In cases where provincial ministries are not required to post a proposal notice on the Environmental Registry for public comment, they may still provide a public service by posting an "information notice" under section 6 of the *EBR*. These notices keep Ontarians informed of important environmental developments.

During the 2002/2003 reporting year, six ministries posted 59 information notices related to policies, regulations and instruments, more than last year's total of 37. This year's notices were distributed as follows:

Number of Information Notices
(Other than Forest Management Plans)
April 1, 2002–March 31, 2003

Ministry	
MBS	1
MAH	9
MNDM	6
MNR	26
MOE	15
MTO	2
Total	**59**

(Please refer to Section 2 in the Supplement to this report for a more detailed description of these notices.)

The Ministry of Natural Resources posted 23 additional information notices for Forest Management Plans during this reporting period. Last year, the ministry posted 17. These plans establish long-term objectives for sustainability, diversity, timber harvest levels and forest cover in particular forests. Once again, the ECO commends the ministry for posting them.

The Use of Information Notices

Ministries should use an information notice only when they are not required to post a regular notice for public comment (under sections 15, 16 or 22 of the *EBR*). Significant differences exist between regular proposal notices posted on the Registry and information notices. With regular proposal notices, a ministry is required to consider public comments and post a decision notice explaining the effect of comments on the ministry's decision. The ECO then reviews the extent to which the minister considered those comments when he or she made the final decision. The ministry must also consider its Statement of Environmental Values in the decision-making process. This approach is superior to posting an information notice and provides greater public accountability and transparency.

As in past years, some ministries sought public comment through information notices. This practice causes confusion for the public, since, as noted above, there is no legal requirement for the ministries to consider public comments or to post a final decision with regard to information notices. As described in more detail in the ECO's 2000/2001 annual report, if a prescribed ministry decides that it is appropriate to seek public comment on a policy, Act or regulation proposal through the Registry, the correct procedure is to post a regular notice, not an information notice. Ministries that post information notices can certainly inform the public in the text of the notice about the availability of any other "non-*EBR*" consultation opportunities.

Quality of Information Notices

Beginning with our 1999/2000 annual report, the ECO has continued each year to express concern that the Environmental Registry "template" incorrectly classifies information notices as "exceptions," and has urged MOE, which is responsible for the template, to make corrections. The ECO is pleased that MOE introduced a new template for information notices in October 2002. Ministries are using the new template, although some of them continue to update information notices that originally used the old template.

Most notices explained specifically why it was appropriate to post an information notice on the Registry as opposed to a regular notice seeking public comment. However, several notices contained explanations that seemed vague and excessively legalistic. Ministries should continue to try to ensure that notices use plain language and precise explanations. As always, ministries should ensure that all information notices include the name, address, phone number and fax number of a ministry contact person.

Exception Notices

In certain situations, the *EBR* relieves provincial ministries of their obligation to post environmentally significant proposals on the Registry for public comment.

There are two main instances in which ministries can post an "exception" notice to inform the public of a decision and explain why it was not posted for public comment. First, ministries are able to post an exception notice under section 29 of the *EBR*, when the delay in waiting for public comment would result in danger to public health or safety, harm or serious risk to the environment, or injury or damage to property (the "emergency" exception). Second, ministries can post an environmentally significant proposal as an exception notice under section 30 of the *EBR*, when the proposal will be or has already been considered in another public participation process that is substantially equivalent to the requirements of the *EBR*.

Ministry	Emergency Exception (Section 29 of the *EBR*)	Equivalent Public Participation Exception (Section 30 of the *EBR*)
MNR	1	19
MOE	5	3
TOTAL	**6**	**22**

(Please refer to Section 3 of the Supplement to this report for a more detailed description of all these notices).

MNR set out specific reasons for using the section 30 exception for the 19 equivalent public participation exception notices it posted, all of which are related to regulations that establish or modify parks and conservation reserves set out in Ontario's Living Legacy. (For more information on the nature of these notices, see pages 40-42 of the ECO's 2000/2001 annual report.)

The reasons for using exception notices appear to be acceptable. However, some of the notices provided scant detail. For example, MOE posted an emergency exception notice that described a Direction it had issued to the Canadian National Railway Company to continue to operate and maintain the communal water supply in the Village of Redditt, District of Kenora, until June 30, 2003. The notice indicates that the Direction was issued after the company expressed its intention to shut down the water system by spring 2003. The notice should have indicated exactly when the railway company informed the ministry it would shut down the system and why it was not possible for the public to consult on the ministry's decision to issue the Direction, given that a draft Direction was provided more than one month before the Direction was issued.

Several notices posted during the reporting period — such as MOE's decision to permit Nortel to undertake in-situ soil treatment at its Belleville site — failed to provide the name of a person to whom the public could direct inquiries. Some notices, such as the notice for the Direction for the water works discussed above, failed to include both contact information and a contact name.

In some cases there were delays in posting emergency exception notices. The lengthiest delay was for a notice describing an Order to declare that the proposed dredging of the navigation channel between Moosonee and Moose Factory Island is not subject to the requirements of the *Environmental Assessment Act*. The notice was posted one and a half months after the Order was issued. The ministry should have been more prompt in posting the notice.

(For ministry comments, see page 203.)

Late Decision Notices

When ministries post notices of environmentally significant proposals for policies, Acts, regulations or instruments on the Environmental Registry, they must also post notices of their decisions on those proposals, along with explanations of the effect of public comment on their final decisions. But sometimes ministries either fail to post decision notices promptly or do not provide the public with updates on the status of old, undecided proposals. In those cases, neither the public nor the ECO is able to tell whether the ministry is still actively considering the proposal, has decided to drop the proposal, or has implemented a decision based on the proposal while failing to post a decision notice. This reduces the effectiveness of the Registry, and may make members of the public reluctant to rely on the Registry as an accurate source of information.

While there is no legal requirement that ministries provide updates on old undecided proposals, it is helpful to the public. The ECO encourages ministries to post decision notices stating that the ministry has decided not to proceed or has postponed a particular decision. This action is more informative than allowing original proposal notices to languish on the Registry for years.

The *EBR* requires the ECO to monitor ministries' use of the Registry, and specifically requires the Environmental Commissioner of Ontario to provide a list of all proposals posted during the reporting period for which no decision notice has been posted. That list is included in the Supplement to the annual report.

The ECO periodically makes inquiries to ministries on the status of proposals that have been on the Registry for more than a year and suggests they post either updates or decision notices. Below is a list of selected proposals for policies, Acts and regulations posted before March 31, 2002, and still found on the Registry in April 2003. Ministries had provided neither a decision notice nor an update for these proposals as of April 1, 2003. Some of these proposals were posted as far back as 1996 and 1997, and some were flagged by the ECO in previous annual reports. Yet, ministries did not address them in this reporting year. The ECO urges ministries to update the public and the ECO on the status of these proposals.

MOE

PA6E0012	Lake Superior Lakewide Management Plan — Stage 2: Load Reduction Targets (10/25/1996)
RA7E0026.P	Amendments to the Petroleum Refineries Sector Regulation (12/30/1997)
RA7E0030.P	Consolidation of Acid Rain Regulations (12/30/1997)
RA7E0025.P	Amendments to the Pulp and Paper Sector Regulation (12/30/1997)

MNR

RB8E3001	Regulation to Prohibit Hunting and Trapping of Wolves in Clyde, Bruton and Eyre townships of Algonquin Provincial Park (2/12/1998)
PB8E2015	Water management plan for the Michipicoten River (6/18/1998)
PB8E2016	Water management plan for the Montreal River (8/7/1998)

(For ministry comments, see page 203.)

Part 3:

Significant Issues – 2002/2003

Each year the ECO highlights a number of "significant issues" that have been the subject of recent applications under the *EBR* or are related to recent decisions posted on the Environmental Registry.

Pits and quarries are frequently sources of environmental concern. This year, the ECO has examined some of the forces that drive the demand for aggregates — primarily changing construction standards for highways and roads. The ECO describes some province-wide trends for extracting sand, gravel and rock, and the environmental consequences.

Over the past several years, the ECO has focused repeatedly on surface water quality concerns, and has highlighted a number of land uses and industrial activities that contribute to impaired water quality. This year the ECO reviews the quality of effluent from municipal sewage treatment plants, and the potential impacts of these effluents on Ontario lakes and rivers.

Last year, the ECO's annual report noted the need to conserve biodiversity in Ontario, and recommended that the Ministry of Natural Resources develop a provincial biodiversity strategy. This year, the ECO expands on this theme.

This section also provides updates on a variety of issues the ECO has reviewed in past years: the monitoring of industrial air emissions, energy conservation measures, Ontario's smog plan, and progress on Smart Growth.

Aggregate Use in Road Construction

The Ontario Ministry of Transportation has improved highway construction standards over time in order to increase pavement longevity and respond to increased traffic loads. This has included more stringent standards for the key raw materials in highway construction, primarily crushed stone, gravel and sand. Collectively, these materials are called mineral aggregate, and they are an important nonrenewable resource, regulated by the Ministry of Natural Resources. However, the environmental consequences of higher rigor in road construction standards have not been assessed or communicated to the public.

To provide context, there are approximately 2,800 licensed aggregate pits and quarries in Ontario. Pits produce loose material, usually sand and gravel. Quarries excavate bedrock (consolidated) material via blasting. Although aggregate pits and quarries make up less than 1 per cent of land in central Ontario, they are often at the centre of land use conflicts. The ECO frequently receives letters of complaint and *EBR* applications about aggregate operations, raising concerns about interference with groundwater flow and well function. (See pages 175-176 of the Supplement to this report regarding concerns about a site plan amendment to an aggregate operation.) Noise and dust from aggregate operations can also result in adverse impacts, and homeowners living close to aggregate operations frequently believe that their property values are depreciated.

One source of conflict is that the Provincial Policy Statement (PPS), which guides all land use planning under Ontario's *Planning Act*, outlines policies that appear to be contradictory. On the one hand, the PPS uses clear language to emphasize the importance of aggregate resources and aggregate operations: "As much of the mineral aggregate resources as is realistically possible will be made available to supply mineral resource needs, as close to markets as possible. Mineral aggregate operations will be protected from activities that would preclude or hinder their expansion or continued use or which would be incompatible for reasons of public health, public safety or environmental impact." But the Provincial Policy Statement also clearly states that "natural heritage features and areas will be protected from incompatible development."

Impacts of Aggregate Extraction

Operators of pits and quarries remove virtually all vegetation, topsoil, and subsoil to reach the aggregate underneath. By necessity, this also removes any natural habitat that may have been on a site, and disrupts any pre-existing streamflow. Aggregate operations invariably create new final grades on the land, and alter drainage patterns. Since aggregate deposits act as underground water reservoirs, once the aggregate is gone, the water storage capacity is lost as well. In some cases a large portion of a stream's volume is derived from groundwater, which maintains a "base flow" for streams. Base flow is important, as it often ensures that stream flow is maintained, even in the very dry summer season. Hence, land disturbance from pit and quarry activity can negatively affect flow, even if the excavation doesn't extend below the water table.

> *... Since many areas of southern Ontario have only small remnant patches of natural terrestrial habitat, the siting of pits and quarries can become very controversial. This is especially true on the Niagara Escarpment, one of Canada's most significant landforms ...*

Since many areas of southern Ontario have only small remnant patches of natural terrestrial habitat, the siting of pits and quarries can become very controversial. This is especially true on the Niagara Escarpment, one of Canada's most significant landforms, designated a UNESCO World Biosphere Reserve. The Niagara Escarpment provides a variety of unique habitats, but also offers extremely high quality aggregate for industry. Land use conflicts of this type are not unique to the Niagara Escarpment. In southwestern Ontario there are significant aggregate deposits under Carolinian forestlands. If aggregate is removed from these locations, the existing remnant Carolinian forest is destroyed.

Once aggregate extraction sites are no longer in operation, often after decades of extraction, they can be rehabilitated and returned (with some investment of capital) to productive land uses. Examples of rehabilitated end uses include agriculture, natural habitat or recreational uses such as golf courses. For this reason, aggregate extraction is often described as an interim use of land. In Ontario, the *Aggregate Resources Act*, administered by the Ministry of Natural Resources, requires aggregate operations to rehabilitate sites once the extraction phase is over. However, evidence indicates that land is being degraded at a faster rate than pit and quarry sites are being rehabilitated. For example, provincial data indicate that from 1992 to 2000, an average of 1,064 hectares of new area was disturbed on an annual basis, while over the same time period an average of only 449 hectares of land was rehabilitated each year. Over this time span, approximately 5,500 hectares of degraded land has accumulated due to aggregate extraction.

In 1992, MNR published a "state of the resource report" on aggregate resources in southern Ontario, stating that " ...the *Aggregate Resources Act* represents a major step towards addressing environmental concerns and ensuring effective rehabilitation of pit and quarry sites." The 1992 report also suggests that the monitoring of licensed aggregate sites "over the next five year period should begin to demonstrate the effects of the new *Aggregate Resources Act* on rehabilitation." Evidently, MNR was anticipating that a greater amount of rehabilitation would occur. Regrettably, this has not been the case, and unless the rehabilitation rate improves significantly, the validity of the "interim land use" concept in the aggregate sector will be a serious concern.

... from 1992 to 2000 ... approximately 5,500 hectares of degraded land has accumulated due to aggregate extraction....

Demand for Aggregates

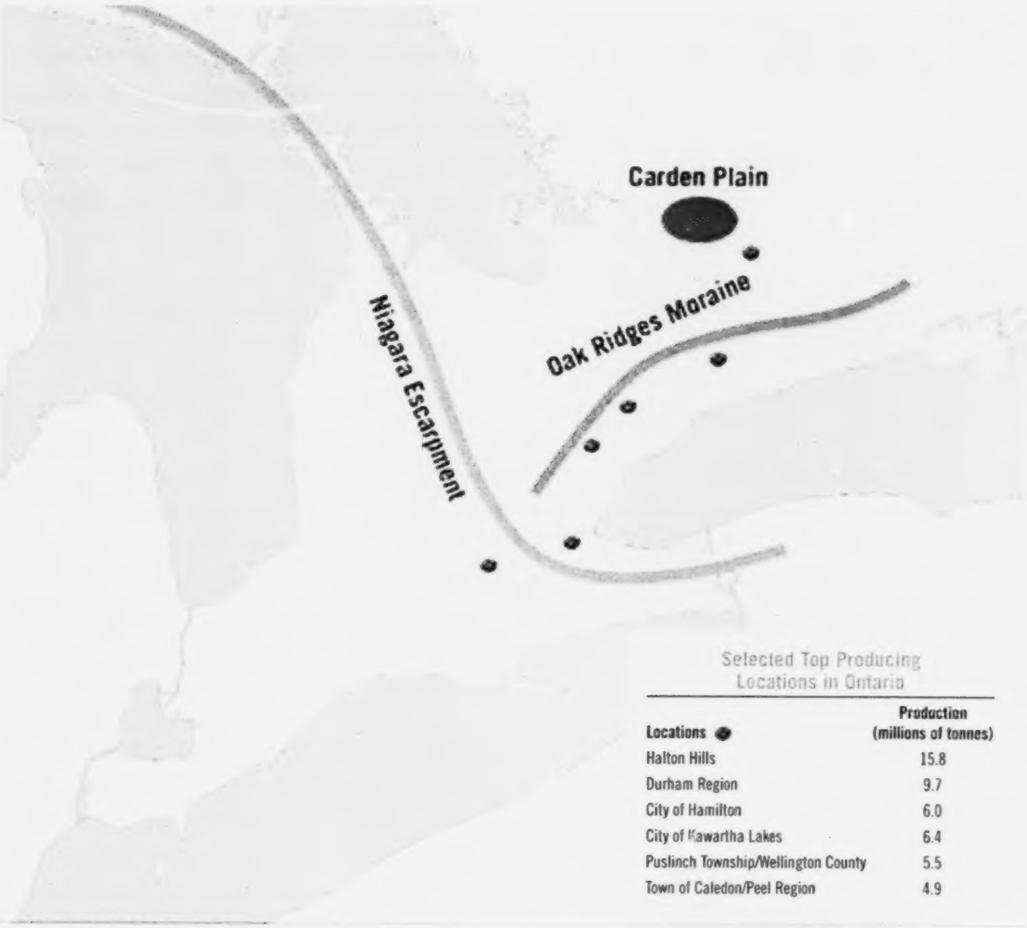
Aggregates are consumed in large quantities to meet road construction and other infrastructure development activities. It is important to recognize that aggregate is not just dirt or soil that is readily available from an unlimited number of locations. Aggregate, in fact, includes many distinct grades of sand and gravel, varying both in their geologic origin and in their subsequent processing. Commonly used processing techniques include crushing, screening and washing. Each product type is manufactured to meet set engineering specifications.

Ontario's demand for aggregate is large, with production in the province exceeding 160 million tonnes in 2001, equaling more than one-third of the annual aggregate production for Canada. Estimates indicate that over 55 per cent of all Ontario aggregates are consumed in road construction, utilizing a wide range of aggregate products obtained from different pits or quarries. Some of the top aggregate-producing locations are identified in the figure below.

The construction of a local two-lane highway can consume over 15,000 tonnes of aggregate per kilometer. New construction of a six-lane asphalt freeway consumes over 48,000 tonnes of aggregates for each kilometer of roadway. The provincially managed highway network is comprised of 19,396 kilometers, as expressed in terms of two-lane equivalents, and the vast majority of provincially managed roadways are paved. The Ministry of Transportation has the mandate of building, rehabilitating and maintaining the provincial highway network.

Municipalities are responsible for highways in their local jurisdictions, and, in fact, the municipal highway network is the largest in the province — approximately 141,000 kilometers, as expressed in two-lane kilometer equivalents. (As a result of a recommendation of the "Who Does What" consultations in 1996, responsibility for approximately 5,000 kilometers of road was transferred to municipalities from the province in the late 1990s.)

Important Geological Features of Southern Ontario and Aggregate Production



Selected Top Producing Locations in Ontario

Locations ●	Production (millions of tonnes)
Halton Hills	15.8
Durham Region	9.7
City of Hamilton	6.0
City of Kawartha Lakes	6.4
Puslinch Township/Wellington County	5.5
Town of Caledon/Peel Region	4.9

Factors Influencing Aggregate Consumption

Part of MTO's mandate is to develop engineering standards, policies and guidelines for the design, construction, operation and rehabilitation of Ontario's highways. To promote consistency, MTO and the Municipal Engineers Association rely on the Ontario Provincial Standards for Roads and Public Works (OPS). OPS objectives include the development of the design for roads, specifications for materials, and promotion of the use of OPS specifications on a provincial basis. Municipalities commonly adopt OPS specifications.

Aggregate specifications for highways have changed over time with the intention of improving pavement longevity and reducing the frequency of disruptive and expensive repairs. In addition, highway designers are responding to a heavier vehicle fleet and increased traffic loads. Key changes in aggregate specifications have included increased percentages of stone, with increased amounts of crushed particles. For example, in the late 1990s, MTO increased the crushed material content requirement in Granular A aggregate, used as a base in highways, from 50 per cent to 60 per cent.

A more sophisticated evaluation of the geologic origin of aggregate is also taking place, since the composition of source rock can have a bearing on the long-term performance of highways. As a result of new specifications in Ontario, fewer aggregate pits are deemed suitable sources, resulting in increased demand for quarry products, particularly for stronger asphalt pavement and concrete. More specifically, demand has increased for aggregate from quarries on the Niagara Escarpment and the Carden Plain. Also, some of MTO's highest specification aggregates are used in asphalt paving materials for high-volume freeways. In this case, suitable aggregate is not available in the Greater Toronto Area or immediate vicinity, since the appropriate geology does not exist in this part of the province, and the aggregate must be brought south from the Canadian Shield.

Changes in aggregate specifications have brought about increased transportation distances for aggregates in Ontario in recent years. Longer hauling distances require more trucks. This means an increase in fuel consumption, resulting in higher aggregate costs, and a corresponding increase in the release of hydrocarbon emissions to the atmosphere, resulting in higher environmental costs. In the public eye, truck traffic in some locations is considered excessive, and there is evidence that the transportation of aggregate contributes to the deterioration of roads.

Pressure for aggregate use continues to come from many directions. Aggregate is used not only in the construction of new major highways, but also in reconstruction, widening and rehabilitation of existing highways. Road standard changes over time have resulted in more aggregate being laid down per unit area of highway. The base layers that support the pavement on highways have become more substantial and major highways have become prominent features on the landscape.

Conserving Aggregates

One strategy for conserving aggregate resources and reducing the demand for virgin aggregate is to recycle and reuse materials in road construction. MTO specifications allow for the reuse of reclaimed aggregates/concrete and asphalt pavement, with qualifying criteria. The specifications also allow the use of selected industrial byproducts, including particular types of slag and materials such as crushed glass or ceramics, which exhibit good engineering and environmental characteristics.

Up to 100 per cent of stripped or older asphalt pavement is now used in new pavements and in the granular-base layers that support the pavements on both provincial and municipal highways. MTO and OPS permit 100 per cent use of Recycled Asphalt Pavement (RAP) in certain hot mix asphalt products. In practice, these products usually contain approximately 40 per cent RAP or less, because air emissions during paving work can become problematic at higher concentrations.

Highly urbanized areas also generate significant volumes of non-virgin materials, such as crushed concrete, that could be used in road construction. Although the widespread use of approved non-virgin materials would have a small impact on Ontario's total aggregate production, it is still significant in terms of resource conservation.

However, Ontario is not taking full advantage of the opportunity to conserve aggregate. Estimates suggest that only 3 per cent of Ontario's aggregate consumption is supplied by non-virgin materials, in great part because of the lack of incentive. In other jurisdictions, road construction contracts and bid-preference systems encourage the use of non-virgin materials. MTO does not use these systems, nor does the ministry monitor how much non-virgin material is used in highways. And municipalities use only a minimal level of recycled materials. (Peel Region, however, did use mixed broken glass as an aggregate in road construction and, although the volumes used were small, Peel was able to divert this waste from landfilling.)

> *... over the next 20 years, MTO highway initiatives will require very large volumes of aggregate, equal to or greater than what has been consumed in the past two decades ...*

It is anticipated that over the next 20 years, MTO highway initiatives will require very large volumes of aggregate, equal to or greater than what has been consumed in the past two decades. Significant increases in the consumption of aggregates by municipalities are also predicted. Road width at the municipal level is an important factor. Under older neighbourhood design, many residential streets were constructed with a 6.5-meter pavement width. The most common pavement width used today for local streets is 8.5 meters. The ECO speculates that a review of the design standards for urban streets and new subdivisions could serve a dual purpose, both conserving aggregate and reducing urban sprawl.

An Integrated Approach Needed

Aggregate specification changes over the last decade have had significant impacts on how our aggregate resources are being managed. Under the *Environmental Bill of Rights*, ministries have an obligation to explain such impacts to the public. MNR and MTO should be articulating the environmental, social and economic implications of changing road standards, and sharing these implications with the public. Right now, the public is unaware of changes in highway standards, the consequences for aggregate consumption, or the implications of future aggregate demands on the southern Ontario landscape.

MNR has also not informed the public about the current status of our aggregate resources. The ministry's 1992 State of the Resource study noted concern about existing aggregate reserves and described a need to secure additional reserves to avoid longer transportation hauls. In the fall of 2002, MNR made a presentation to the Central Ontario Smart Growth Panel, indicating that the majority of high quality crushed stone for the Central Ontario Zone was produced from five quarries located in the Niagara Escarpment Plan Area, and that the reserves on these sites are becoming critically low. MNR should be undertaking a new State of the Resource report, based on a range of plausible future scenarios for aggregate consumption.

More generally, the ECO has observed a lack of meaningful inter-ministerial consultation regarding road standards, aggregate use and the implications for other natural resources. Several ministries should have a role in such discussions, including the Ministries of Natural Resources, Transportation, Environment, and Municipal Affairs and Housing. Since these ministries represent a wide range of mandates, effective conflict resolution mechanisms will be needed. For example, MTO has a relatively straightforward mandate as the ministry responsible for transportation infrastructure. MNR's mandate is more complex: it must grapple with competing interests, including both the protection of natural heritage features and the development of mineral aggregate resources. Ministries will need to think beyond the "near and now," and find integrative solutions that address the big picture and long-range concerns. *(For ministry comments, see page 204.)*

Recommendation 2

The ECO recommends that the Ministries of Natural Resources and Transportation collaborate on a strategy for conserving Ontario's aggregate resources. This strategy, which should be developed with public consultation, should consider both road construction needs and the need to conserve aggregate resources.

The Environmental Impacts of Sewage Treatment Plant Effluents

Introduction

Sewage treatment is a largely invisible basic service that most Ontarians spend little time worrying about, confident that proper sewage treatment infrastructure is in place and well managed, and that inadequate sewage treatment is primarily a problem of distant developing countries. Yet poor effluent quality from municipal sewage treatment plants (STPs) is one of the root causes of water pollution in Ontario's lakes and rivers.

The International Joint Commission identified 17 Ontario Great Lakes locations as Areas of Concern in 1985, and at 10 of these 17 sites, municipal wastewater pollution was identified as a major problem. Since then, improvements have certainly been made at many Ontario STPs, but not nearly enough to compensate for population growth and the general aging and deterioration of facilities. Some concerned citizens are observing problems: in 2002/2003 the ECO received three separate applications under the *Environmental Bill of Rights*, all related to water quality problems and STPs. (See pages 155-158 regarding an *EBR* application on the Ashbridges Bay STP in Toronto)

... poor effluent quality from municipal sewage treatment plants is one of the root causes of water pollution in Ontario's lakes and rivers ...

The ECO has also been monitoring the issue from the perspective of the Canada-Ontario Agreement on the Great Lakes (COA). For example, the ECO noted in our 1999/2000 annual report that although the 1994 COA had set a target of upgrading eight Ontario STPs by the year 2000, only one plant (in Espanola) had been fully upgraded by that deadline. (The COA was renewed in 2002, and is described on pages 73-76.)

How much STP effluent is discharged to Ontario waterways?

Over 450 municipal sewage treatment plants were operating in Ontario in 1998. Their combined treatment capacity was 6.7 million cubic metres per day, with Lake Ontario getting the lion's share of effluents — receiving 38 per cent of the overall provincial STP discharge capacity in 1998, for instance. The Ottawa River received the next largest discharge volume, almost 9 per cent of the provincial total capacity. Many other waterways connected to the Great Lakes receive significant volumes of municipal STP discharges, especially Redhill Creek, the Grand River, the Thames River, the St. Lawrence River and the Detroit River.

What is in municipal sewage?

Municipal sewage is a complex mixture of liquid wastes flushed down sewers by residential, commercial, institutional and industrial sources. It contains human wastes, of course, and bathroom tissues, which arrive at the treatment facility largely in the form of dissolved organic matter and suspended fibrous material, and which contribute large loadings of nitrogen, phosphorus and pathogens. These are the substances that municipal STPs are chiefly designed to treat.

Municipal STPs also receive many other types of wastes, however, which are not as responsive to treatment — some are only partially degraded during sewage treatment, some tend to accumulate in sewage sludges, and other wastes pass unaffected into the final effluent and the receiving waterway. For example, commercial and industrial facilities discharge a wide variety of liquid wastes to sewers, often containing persistent organic pollutants, metals, and organic materials that resist decomposition. Residential and industrial cleaning agents and miscellaneous grit and plastic debris are also common constituents of municipal sewage. Human wastes contribute trace quantities of hormones and pharmaceuticals to the sewage mixture, some of which may have the ability to disrupt the functioning of animal and human endocrine systems. (For more specific information, see Parameters. . . , next page.)

Parameters that may be Measured in STP Effluent

Biochemical oxygen demand (BOD)

– measures the rate that oxygen is used by micro-organisms to break down organic waste. Sewage effluents that receive only primary treatment tend to have high levels of BOD. Poorly operating secondary treatment plants may also produce effluents with high BOD levels. Effluents containing a lot of organic waste will use up more of the receiving water's dissolved oxygen and, in severe cases, can kill aquatic life.

Total suspended solids (TSS)

– is a measure of how effectively the treatment process is settling out solids. When hydraulic flow rates are too high, solids do not have time to settle. In extreme cases, high levels of suspended solids can smother and contaminate aquatic life and can kill fish by clogging their gills. Many trace metals and organics also have a tendency to adhere to suspended solids.

Total phosphorus (TP)

– is a measure of all forms of phosphorus. Phosphorus is an essential nutrient for plants such as algae, but too much phosphorus will over-stimulate the growth of algae, resulting in odours, other aesthetic problems, large fluctuations in oxygen levels and diminished biodiversity.

E. coli

– measures the number of *Escherichia coli* bacteria present. *E. coli* is considered the most suitable and specific indicator of the persistence of pathogenic organisms in sewage. Except where exempted by an MOE guideline, disinfection requirements apply to all Ontario municipal STPs discharging to surface waters.

Ammonia

– measures total amount of ammonia present. Un-ionized ammonia is the toxic component of the total. Although ammonia has been listed as a toxic substance under the *Canadian Environmental Protection Act (CEPA)*, MOE does not normally set regulatory limits on ammonia concentrations in the effluents of Ontario STPs.

What is the impact on waterways?

According to Environment Canada, the treated effluents of municipal STPs are a leading source of the biochemical oxygen demand (BOD), total suspended solids (TSS), nutrients, organic chemicals and metals that are discharged into Canadian waters. Persistent organic pollutants, bacteria and other types of pathogens are also commonly associated with STP effluents.

The impacts of STP effluent on water quality and ecosystems can vary greatly, depending on factors such as the volumes and quality of effluent being discharged and the ability of the receiving waterway to dilute and assimilate contaminants. In the approval process for STP discharges, regulating agencies usually consider the assimilative capacity of watercourses and variable flow rates. Other things being equal, larger lakes and rivers can dilute more effluent than smaller ones, and fast-flowing, well-oxygenated rivers have a greater assimilative capacity than slow-moving rivers. Where municipal STPs discharge into protected bays or harbours (such as Toronto's Ashbridges Bay), concentrated effluents may have stronger local impacts on fish habitat or nearby bathing beaches.

Waterways that receive a high proportion of effluent from primary treatment plants (see Factors ... below) may be more seriously impacted than waterways that receive secondary treatment effluent. For example, in 1991, Lake Superior, the Ottawa River and the St. Lawrence River each received over 80 per cent of their Ontario-source STP volume from plants providing only primary treatment, according to MOE.

Factors that Affect STP Effluent Quality

The type of process used by a sewage treatment plant certainly affects the quality of effluent that is discharged to the receiving lake or river. It is important to keep in mind that each STP is designed and operated for a unique location, and may have special features to respond to local needs, financial constraints and the assimilative capacity of the receiving waterway.

Ontario STPs are often categorized as primary, secondary or tertiary treatment facilities, and for simplicity's sake the discussion below will follow this approach. **Primary** treatment is the most basic sewage treatment, involving mainly mechanical screening and settling of solids to form primary sludge and a wastewater that is more or less clear to the naked eye. At **secondary treatment** plants, the wastewater leaving the primary treatment is mixed with a controlled but very dense community of microorganisms and plentiful oxygen. This beneficial microbial community is able to consume dissolved organic matter and also many pathogens. Dead microorganisms are continuously cropped and settled out to form secondary sludge. Many factors can impede the ability of the microbial community to do its job, especially inadequate oxygen levels or sudden changes in concentrations of nutrients or toxins, which can inactivate the community.

Some facilities follow the secondary process with a **tertiary treatment**, usually custom-designed to control a single parameter that regulators have identified as a special problem for the receiving water body. Parameters that can be controlled by tertiary treatment include colour, metals, organic chemicals and nutrients, especially phosphorus and nitrogen.

The quality of STP effluent depends not only on the treatment technologies at the facility, but also on the skill of the operators, the season of the year, the weather, and the types of industries that are hooked up to the municipal sewer system. In Ontario an estimated 12,000 industrial facilities are connected to municipal sewers and add a wide array of pollutants to the system. In some municipalities, such as Hamilton, landfill leachate is collected and diverted to the sewage treatment plant, even though STPs are not designed to treat this type of waste.

According to Environment Canada, municipal STPs contribute much higher loadings of phosphorus and nitrogen to Canadian waterways than industries that discharge directly into lakes or rivers. Increases in phosphorus levels can lead to long-term, fundamental changes in the structure and species mix of aquatic communities. One of the first results can be the proliferation of algae and other aquatic plants. As these plants decay and die, oxygen in the water can be used up, and fish kills can result.

The ECO noted in our 2001/2002 annual report that a number of lakes and rivers in southwestern Ontario are exhibiting elevated levels of nitrogen and phosphorus. Run-off from agricultural land is thought to be the major contributing factor, but municipal STP effluents are also contributing to these loadings. Phosphorus loadings, especially to Lake Erie, have been a long-standing concern. Bi-national controls in the 1970s led to reduced phosphorus loadings from STP effluents, and great improvements in the health of Lake Erie. But the concentrations of phosphorus in Lake Erie continue to exceed guidelines, and the lake is once again in trouble.

STP effluents contribute not only to overall long-term loadings of pollutants; they can also be acutely toxic to fish and other aquatic organisms living near the discharge point. "Acutely toxic" means that test organisms cannot survive for more than hours or days when exposed to the effluent. According to a recent Environment Canada overview, under estimated average conditions, some municipal wastewater discharges could be toxic for 10–20 kilometres downstream. Plants and animals that live on the bottom of lakes and rivers may be disrupted up to 20–100 kilometres from STP discharge points.

> *... STP effluents contribute not only to overall long-term loadings of pollutants; they can also be acutely toxic to fish and other aquatic organisms living near the discharge point ....*

Acute toxicity is most often caused by high levels of ammonia and chlorine or heavy metals and organic contaminants. Ammonia (a product of nitrogen metabolism) appears to be a particular problem; municipal STPs are the leading quantifiable source of ammonia entering waterways in Canada. Many municipal STPs add chlorine to their final effluent during summer months to kill bacteria, viruses and other pathogens, and chlorine is also acutely toxic to fish. Moreover, the combination of chlorine and ammonia in water will form chloramines, which are highly toxic to fish and other organisms. Only a very small percentage of STPs address this problem by de-chlorinating their effluent before discharging it. However, a number of Ontario STPs (including Windsor, Sarnia, Barrie, Georgetown, London and Peterborough) have moved to ultraviolet disinfection of their final effluent, which eliminates the chlorine toxicity problem.

What is the condition of Ontario STPs?

It is difficult to present an up-to-date overview of Ontario's municipal STPs because the Ministry of the Environment last published a comprehensive summary in 1993, based on 1991 data. In 2001, a consulting firm provided some updates after evaluating 1998 MOE data for a background paper commissioned by the Walkerton Inquiry. There are many ways to evaluate the condition and performance of STPs. One can consider the loadings of pollutants released, the toxicity of effluents, the amount of sewage that bypasses treatment, the number of plants that are operating at or over capacity, and the percentage of facilities with secondary or tertiary treatment. Evaluating all these indicators can provide a rounded picture. Available public data indicate that the effluents of Ontario STPs are putting very serious pressure on the environmental quality of Ontario waterways, and that a large proportion of STPs need upgrades.

Range of treatment types

In 1991, 72 per cent of Ontario's sewage volume received secondary treatment, 4 per cent received tertiary treatment, and 18 per cent of the volume (28 facilities) received primary treatment. This situation had improved somewhat by 1998; the number of primary treatment plants had dropped from 28 to 23 plants. But in 1998, large population centers like Windsor, Thunder Bay, Sarnia and Cornwall all still had primary treatment with continuous phosphorus removal; Sault Ste Marie had primary treatment only; and Timmins had primary treatment with de-chlorination. Most recently, Thunder Bay has started construction of a secondary treatment plant, and Sarnia's was upgraded to secondary treatment in 1999. MOE has informed the ECO that there are 15 primary STPs operating in Ontario in 2003, and the ministry has established priorities for updating the certificates of approval (Cs of A) for these plants.

Since primary sewage treatment plants provide only mechanical screening and settling of solids, their effluent quality is relatively poor. Thus, the 28 primary plants that operated in Ontario in 1991 contributed a disproportionate amount of pollutant loadings to Ontario waterways. Although they treated only 18 per cent of the total sewage flow, they contributed 47 per cent of the total BOD loadings, 39 per cent of the TSS loadings and 28 per cent of the TP loadings. Moreover, primary treatment removes virtually no ammonia, which is toxic to fish.

Loadings

The treated effluents of municipal STPs add significant loadings of many kinds of pollutants to Ontario waterways, some of which are measured in tonnes per day. According to MOE's analysis of 1991 data, Ontario waterways received a total of 112 tonnes per day of BOD, 104 tonnes per day of TSS, and 4.1 tonnes per day of total phosporus (TP) from the effluent of Ontario STPs. Over the four years from 1987 to 1991, a period of strong economic growth, loadings to Ontario waterways increased significantly. The overall effluent volume of Ontario STPs increased by 12 per cent, the overall loading of BOD increased by 25 per cent, and the overall loading of TSS increased by 14 per cent. The only improvement in that four-year period was in overall loading of TP, which decreased by 11 per cent. Unfortunately, MOE has not published more recent summary data, making it impossible to assess whether STP pollutant loadings have improved or deteriorated over time.

Ontario decision-makers are missing another important analytical tool as well: MOE has not published an estimate of the pollutant loadings from various types of dischargers to Ontario waterways. This means that MOE and the public cannot easily evaluate the relative impacts of STP effluents compared to industrial dischargers or non-point sources. The ECO first raised this point in our 1997 annual report.

Toxicity of Ontario STP effluents

Major industries that discharge to Ontario waters must test effluents for acute toxicity using indicator species such as trout and water fleas (*Daphnia magna*), and must report results. MOE issues Director's or Provincial Officer's Orders when industrial effluents fail such toxicity tests. But municipal STPs are generally not required to carry out such testing.

An early 1990s MOE study indicated that a significant proportion of Ontario STPs do produce acutely toxic effluents. This is not surprising, since Ontario STPs discharge approximately 55 tonnes of ammonia and 2.5 tonnes of chlorine daily into Ontario waterways. Ontario's top seven sources of ammonia releases to water were all municipal STPs, according to Environment Canada's analysis of 1999 data, with the two largest sources Canada-wide being the Ashbridges Bay STP in Toronto and Ottawa-Carleton's STP.

MOE's current position is that new and expanding STPs will need to control ammonia and chlorine levels in final effluents so that they are non-acutely lethal to aquatic life, while existing facilities are exempt. But MOE's interpretation of this point is variable: for example, MOE allowed the Lakeview STP, serving 700,000 people in Mississauga, to expand its capacity by 17 per cent in 2002, without imposing new requirements to control acute toxicity of final effluents. MOE informed the ECO in July 2003 that the ministry's policy on acute lethality is under review, to be completed in 2004.

Sewage bypassing treatment

Another way of evaluating STP performance is to look at how much sewage bypasses treatment plants during wet weather. Combined sewer overflows (CSOs) upstream in the sewer systems and sewage bypasses downstream at the treatment plants occur because sewers in older urban areas receive both sanitary sewage and storm water. During storms or snow melts, the combined sewage volumes surge, and must be temporarily redirected into waterways to prevent flooding basements or overloading treatment plant capacities.

Combined sewer overflow discharge points are very widespread in older urban areas.

CSO discharge points are very widespread in older urban areas. For example, the City of Toronto has 71 CSO discharge points into local rivers and Lake Ontario, with overflow events estimated to occur dozens of times a year. The total volumes of untreated sewage discharged from CSOs are not summarized nor published on a province-wide basis by MOE. However, since 1997, MOE has required municipalities with combined sewer systems to develop control plans, and as a consequence, municipalities are beginning to evaluate and quantify their CSO discharges. Thus, Hamilton, for example, has been able to estimate that the city's CSOs discharge an average of 4.5 million cubic metres into local waterways during the April-October period of each year.

Sewage bypasses are also common. For example, Toronto's Ashbridges Bay STP redirected sewage to bypass secondary treatment on 12 occasions in 2001. March and April are generally the peak months for sewage bypasses. Sewage treatment plants are allowed to bypass raw sewage only in emergencies — to protect basements from flooding, to prevent damage to equipment at treatment works or pumping facilities, or to prevent solids from being washed out in the treatment works. In some cases, sewage will bypass secondary treatment, but will at least receive primary treatment. In other cases, sewage will bypass both secondary and primary treatment, which means that raw sewage, diluted by storm water, is entering waterways.

According to MOE, 75 municipal STPs reported bypasses in 1991. In total, 2.2 million cubic metres of sewage bypassed primary treatment, and 9.6 million cubic metres bypassed secondary treatment. In 1998, 43 municipal STPs reported bypass events; in total, 3.9 million cubic metres of sewage bypassed primary treatment and 9.2 million cubic metres bypassed secondary treatment. Since MOE has not published summary data on sewage bypass volumes for other recent years, it is hard to draw strong conclusions about sewage bypass trends over time.

Sewage bypasses and CSOs present a special challenge for treatment plant engineers and managers, because they represent extreme surges of flow occurring over just a few days or even hours. Engineers must either find ways to capture and treat these flows (which can be up to 50 times the volumes observed in fully separated sewer systems), or they must redesign urban areas to reduce these occasional surges of stormwater. Both approaches have advocates, and both require considerable commitment and resources. One long-term incremental solution is to replace old combined sewers gradually with separate sewers for storm water and sewage, as part of routine sewer maintenance and upgrade programs. Climate change projections for southern Ontario indicate that over the next 40 years, precipitation will increase, be more variable, and exhibit more variable peak flows. This will tend to exacerbate the problems of CSOs and sewage bypasses.

Number of plants operating near capacity

Many Ontario STPs are being operated near the upper limit of their design capacity or are already overloaded. In 1995, 20 per cent of Ontario STPs were already in need of expansion to meet existing flows; by 2005, over 50 per cent of STPs will need expansion, according to a 1996 internal estimate by MOE. The ministry document estimated that $595 million would be needed to cover the existing (1995) shortfall between actual sewage flows and STP design capacity. A further $1.28 billion would be needed over the period 1995–2000 to rehabilitate existing plants and respond to growth needs. Finally, a further $1.58 billion would be needed over the period 2000-2005 to rehabilitate existing plants and respond to growth needs. As a separate cost, the same MOE document also estimated that $745 million would be needed to upgrade all primary sewage treatment plants in Ontario to secondary treatment.

In total, Ontario STPs would need $4.2 billion in spending over the period 1995–2005 to cover repairs and rehabilitation, to accommodate existing needs and expected growth, and to upgrade primary plants to secondary treatment. This would require province-wide expenditures of approximately $400 million per year dedicated to sewage treatment infrastructure, over 10 years.

How are Ontario STPs regulated?

MOE has prime responsibility for regulating the construction and operation of Ontario STPs. The ministry issues certificates of approval under the *Ontario Water Resources Act (OWRA)* to facility owners. Once issued, Cs of A have no automatic expiry dates, but MOE can revise Cs of A and make them more stringent on a case-by-case basis – usually as part of a facility expansion. MOE has not conducted a province-wide review of Cs of A to tighten the requirements for STPs. However, Ontario residents do have the right under the *Environmental Bill of Rights* to request reviews of specific Cs of A, and, in fact, one such review is currently under way for Hamilton's STP.

By long-standing engineering conventions, the regulatory effluent limits for STPs tend to be parameters that mainly reflect the hydraulic performance of the facility. It is much less common to see regulated limits that directly reflect the environmental or biological performance of facilities. For example, although the effectiveness of secondary treatment depends completely on the health of the microbial community and on adequate aeration levels, Ontario facilities are not required to report on these parameters. MOE requires operators to monitor flows as well as BOD (biological oxygen demand), suspended solids and total phosphorus at nearly all plants, and nitrogen and chlorine as necessary at some plants. MOE's position is that these parameters reflect both the hydraulic and the biological performance of the facilities.

Cs of A issued before 1985 give design or operation objectives, but not compliance limits. Since 1985, MOE has issued Cs of A that include compliance limits to over 200 municipal STPs. MOE measures the performance of the remaining (roughly 250 older) STPs against several MOE policies, which specify STP effluent guidelines for BOD, TSS and TP. Generally, the facilities that have compliance limits written directly into their Cs of A face more stringent limits than those which are assessed against the policy guidelines.

Because many municipal STPs were constructed in the 1970s, their Cs of A are unlikely to reflect current environmental priorities. MOE has acknowledged that outdated Cs of A are a systemic problem, and in 2000 the ministry promised the Provincial Auditor there would be improvements on this front. In May 2002, MOE proposed protocols for updating four kinds of Cs of A, including Cs of A for sewage works (see Registry posting PA02E0007). MOE considered comments received through the Registry posting, and began implementing most of the protocols in 2002. MOE has delayed posting a decision notice until all four protocols have been updated. However, MOE has informed the ECO that as of May 2003, the ministry does not have up-to-date information regarding the overall percentage of sewage works Cs of A that require updating.

Compliance, inspection and enforcement

About 240 municipal STPs in Ontario are operated by the Ontario Clean Water Agency (OCWA), which is a provincial agency established in 1993 to take over certain functions formerly handled by MOE. Another approximately 200 STPs are operated either directly by municipalities or by their contractors (1998 data). The operators of STPs are responsible for sampling and analysing their final effluent, and for submitting the results monthly to MOE regional offices. Operators must follow sampling procedures set out by MOE (Procedures F-10 and F-10-1), unless MOE sets out more or less stringent requirements on a case-by-case basis. Samples must be taken at least monthly, and must be analysed, at a minimum, for BOD, TSS, ammonia plus ammonium nitrogen and total phosphorus. MOE has informed the ECO that 155 municipal STPs must also monitor for one or more of the following parameters: ammonia, bacteria and residual chlorine. Typically, larger facilities will sample four days a month, and will make composite samples over a 24-hour period.

To check for compliance, MOE district offices assess the self-reported data against the ministry's effluent guidelines, or against any effluent limits that may be set out in a C of A. MOE collects effluent samples as part of periodic inspections carried out at least every four years. If the samples collected during an inspection yield analytical results that differ greatly from performance data typically supplied by the authority, the district office is alerted to a potential need to scrutinize the data more thoroughly. While most operators submit valid data sets, there have been cases where fraudulent data were submitted. In 2000, MOE laid numerous charges against a former supervisor of the Brockville STP, including charges of providing false or misleading information on plant performance. At the trial, testimony indicated that operators and technicians were instructed to re-sample or do selective sampling of the treated sewage to sanitize readings. Witnesses testified that phosphorus samples were taken during low flow periods late Sunday nights to bring results down to acceptable levels, and that high test results were omitted from averages.

MOE regional offices also pass along copies of the data to the ministry's Environmental Monitoring and Reporting Branch. This central branch then summarizes the data into an annual Environmental Compliance Report. But it appears there are not enough data at the provincial level to allow ministry staff to check overall trends in compliance. A report prepared for the Walkerton Inquiry found that for the year 1998, MOE had insufficient data to assess compliance for almost 60 per cent of STP facilities.

Reporting on compliance

MOE summarizes the performance of municipal STPs in annual Environmental Compliance Reports on the ministry's Web site. The format and content of these reports deteriorated between 1997 and 1999, as important information was stripped away. In 1997, the compliance report listed:

- in a single printable document, all non-compliant facilities.
- for each facility, each parameter that was exceeded (ammonia, phosphorus, etc.).
- the allowable limit for that parameter as set out in the C of A.
- the time period and frequency (date or month) of the exceedances.
- repeat offenders, marked with an asterisk.

Since 1999, the annual compliance reports have listed only one single parameter that was exceeded for each non-compliant facility. As a result, the public no longer knows which facilities exceed limits for multiple parameters, or which ones are non-compliant two years running. Furthermore, the public can no longer compare exceedances with allowable limits, or check how frequently exceedances occurred within a given year.

Compliance trends

MOE's Business Plan for 1997/1998 set a target of 100 per cent compliance by municipal STPs. The following year, MOE's Business Plan reported that "we ensured that the current rates of water quality compliance were being maintained for municipal sewage works." However, the ministry has not published a summary of the actual rate of compliance by municipal STPs since 1993. Among other things, the 1993 summary showed that secondary and tertiary treatment plants had a much better compliance rate than primary plants, even though primary plants are judged against more lenient guidelines. Primary plants had a 39 per cent compliance rate.

Primary Plants:

Year	# of Plants	Pass	Fail	% Pass	% Fail
1991	28	11	17	39	61
2001	16	9	7	60	40

Secondary Plants:

Year	# of Plants	Pass	Fail	% Pass	% Fail
1991	184	155	29	84	16
2001	177	133	44	75	25

Despite an apparent problem with non-compliance at many municipal STPs, MOE very rarely prosecutes STP operators. And although MOE also has the power to issue Orders requiring STP operators to purchase new equipment or improve monitoring, the ministry appears to prefer voluntary abatement programs for the STP sector. A scan of MOE's 2001 Environmental Compliance Report indicates that in responding to water quality compliance problems, the ministry issued twice as many Orders to the industrial sector as to the municipal STP sector. MOE attributes the difference in the number of Orders to the fact that the industrial sector is covered by MISA regulations, while municipal STPs are covered only by certificates of approval.

> *... the less glamorous tasks of maintaining and repairing this expensive infrastructure has a much lower public profile, in part because the facilities are physically hidden from the population, and because the impacts of gradual infrastructure deterioration are felt by ecosystems, rather than directly by taxpayers...*

Inspections

MOE inspects municipal STPs periodically. The ministry's Business Plans for the last several years have included specific targets for inspection of municipal STPs:

- 120 plants to be inspected for the year 2000/2001
- 155 plants to be inspected for the year 2001/2002
- 115 plants to be inspected for the year 2002/2003

However, MOE does not publish summaries of its inspections of STPs, so there is no public record of how many STPs are actually inspected in a given year, nor the outcome of inspections. In contrast, after the Walkerton tragedy, MOE began inspecting all municipal drinking water plants annually in 2000, and has published summaries itemizing reasons why each drinking water plant failed inspection.

Why have Ontario STPs been neglected?

The public believed the job was finished

In the 1970s the Ontario government, together with municipalities and the federal government, developed an aggressive program to upgrade STPs and install phosphorus removal systems to control eutrophication problems in the Great Lakes, especially Lake Erie. The investments of the 1970s in municipal and industrial wastewater control achieved excellent results in nutrient management, and the recovery of Lake Erie in particular was widely hailed as an environmental success story. The less glamorous tasks of maintaining and repairing this expensive infrastructure has a much lower public profile, in part because the facilities are physically hidden from the population, and because the impacts of gradual infrastructure deterioration are felt by ecosystems, rather than directly by taxpayers. Other types of public infrastructure are under much closer public scrutiny — Ontario's highway system being but one example — and therefore have higher priority maintenance programs. For example, under the Ministry of Transportation's capital construction program, roughly 33 per cent of Ontario highways are rehabilitated every five years, allowing the complete refurbishing of the entire highway network every 15 years.

Other environmental priorities came up

Once the eutrophication of the lower Great Lakes had been addressed, the attention of scientists, regulators and the public shifted to other emerging environmental concerns, such as toxic substances and acid rain.

Control strategies were derailed

In 1986, MOE announced a program that promised to address effluents from municipal STPs — the Municipal-Industrial Strategy for Abatement (MISA). Among other goals, MISA targeted over 400 municipal STPs and also proposed a sewer use control program, to be enforced by municipalities, that would deal with the effluents of approximately 12,000 industrial plants hooked up to municipal sewers. Because of MISA's focus on persistant toxic substances, it staged the introduction of regulations to deal one by one with nine industrial sectors discharging directly to waterways, with municipal STPs last on the timetable. But by 1991, Ontario was in the grip of an economic recession, so the municipal side of MISA was quietly put on the backburner. The one clear benefit that arose from this effort was that MOE published several studies and overviews of Ontario STP performance.

Municipalities and their consultants have long been anticipating that STP treatment standards will become more stringent in Ontario. Environment Canada has heightened these expectations by adding several substances found in STP effluents (ammonia and inorganic chloramines) to the list of CEPA-toxic substances. But MOE, the key regulating agency in this instance, remains silent on the issue.

Funding programs in flux

When the province established the Ontario Clean Water Agency in 1993 as a Crown corporation to "finance, build and operate water and sewage facilities throughout the province and provide service and advice to communities on a cost recovery basis," it became, in effect, OCWA's job to help municipalities upgrade their STPs. Then in May 1997, the province passed the *Municipal Water and Sewage Transfer Act*, which eliminated OCWA's ownership and financier roles and transferred facilities previously owned by OCWA to municipalities. OCWA also no longer provides loans to municipalities for capital infrastructure.

In August of 1997, the province established a $200 million Provincial Water Protection Fund (PWPF) to help municipalities with both drinking water and sewage treatment projects. Most of this funding was paid out by the end of March 2000, with recipient municipalities paying a portion of project costs. In 1998, grants from the PWPF were announced for approximately $75 million of provincial funding toward sewage infrastructure projects. This was significantly less than MOE's 1996 estimate of province-wide sewage infrastructure needs of $400 million per year over 10 years.

In December 1999, the province created the Ontario Superbuild Corporation (an agency of the Ministry of Finance) to address a wide range of infrastructure needs, including water and sewage systems. Part of Superbuild's mandate is to achieve capital investments totaling $20 billion over a five-year period through provincial, broader public sector and private sector partnerships. Funding is certainly available for sewage infrastructure: Superbuild's Web site lists approximately 90 sewage projects approved since spring 1999, including upgrades for Sarnia and Thunder Bay STPs from primary to secondary treatment. But the Web site does not include any analyses of how the Superbuild's funds have been allocated among the broad eligible categories, which also include transportation, sports, culture, tourism and environment. Nor is it possible to judge how the approved sewage projects compare to environmental needs identified by MOE, or how environmental needs were ranked against growth and development needs.

The public is unaware of problems

The public cannot use the Environmental Registry as a window to monitor proposed changes to municipal STPs, because such projects are excepted from *EBR* notice, comment and appeal requirements. Many public sector projects such as sewage and water works are regulated under the *Environmental Assessment Act (EAA)*, so the *EAA* public consultation rules apply instead of the *EBR* rules. However, the ECO raised concerns in our 2001/2002 annual report that the *EAA* rules do not provide the kind of transparency that the *EBR* affords.

As well, MOE has provided very little in the way of public reporting on the state of Ontario STP effluents over the last decade. MOE's Environmental Compliance Reports have deteriorated to the point where they are of very little value to the interested public. Thus, there has been little public pressure for STP improvements. Mississauga Mayor Hazel McCallion summed the situation up succinctly in February 2003: "The [federal] government was listening to the public and the public wasn't clamouring for sewage treatment plants."

MOE has also failed to produce overviews of surface water quality trends, as noted in ECO's 2001/2002 annual report. As a result, we have a very deficient warning system for the health of Ontario waterways. In contrast, MOE provides a high quality of public reporting on ambient air quality trends, and has also begun to report on air emissions of major industrial sectors.

Similarly, there appears to have been little internal evaluation within MOE of the impact of STP effluents, or big-picture, long-term trends. A 1996 staff document noted this problem: "Although information exists on STP effluent treatment levels, bypasses and compliance with guidelines and Cs of A, there has been insufficient analysis of the specific relationship between contaminant levels in STP effluent and environmental problems, e.g., beach closings, fish kills and impaired uses. In other words, even though an environmental problem may exist, it is not clear, on an aggregate basis, to what extent that problem may be attributed to contaminant levels in STP effluent."

The "sticker shock" for decision-makers

This may be the primary factor that has delayed action. Although a 1996 internal MOE report outlined the need for major upgrades at Ontario STPs, the estimated $4.2 billion price tag ran counter to the government cost-cutting exercise under way at that time, and the report was shelved. Unfortunately, this has been another instance where decision-makers have been preoccupied with the "near and now" to the detriment of the environment.

ECO Comment

A new approach is needed

Sooner or later, we will need to upgrade Ontario's aging STPs, forced either by international pressure, or by large-scale ecosystem declines. It would be far preferable to begin the job sooner, because it will need a long-term, incremental approach. All levels of government will need to be involved in the solution. Clear priorities will need to be set, and a new approach to financing will undoubtedly be required. One promising sign has been the recent enactment of the *Sustainable Water and Sewage Systems Act*, which emphasizes a full-cost accounting approach for financing (see pages 105-107 for more information on this Act). An increased focus on optimizing STP performance may be very cost-effective in the short term, and this in turn will require improved monitoring and reporting on STP performance. But the first step — a step that MOE can take now — should be a clear, unvarnished accounting of the environmental impacts of STP effluents on receiving lakes and rivers.

(For ministry comments, see pages 204-205.)

Recommendation 3

The ECO recommends that the Ministry of the Environment put in place a plan to upgrade Ontario's aging municipal sewage treatment plants to modern environmental standards. A first step should be to document and report on the quality of STP discharges to Ontario's receiving waters.

Creating a Biodiversity Framework for Ontario

There are many different environmental issues in Ontario, ranging in scale from the protection of a small wetland in southern Ontario to mitigating the impacts of commercial forestry across entire landscapes. In response, provincial ministries develop policies and programs that address these specific issues, which often vary in their goals and direction. The ECO is concerned that while ministries may be working away at fragments of issues, they often fail to grasp a wider perspective. This failure to see the bigger picture has very practical consequences, since it can result in policies and programs that are inadequate, misdirected, or even counterproductive.

Recognizing the core issues and developing a coordinated plan to address them is a more effective way of dealing with environmental problems. It also allows for an efficient use of government resources. Many of what appear to be separate issues are highly interrelated. If they were approached from the perspective of a comprehensive strategy, they would be seen to be facets of the same problem. At the root of many of these environmental issues is the conservation of biological diversity — biodiversity — which encompasses and unites many of the most serious environmental issues in the province.

Biological diversity can be understood as the variety of native species, the genetic variability within each species, and the variety of different ecosystems and landscapes they form. It is the result of billions of years of evolution, creating ecological systems so complex that humans are only now beginning to understand their dynamics.

Ontario's extensive range of landforms and climates has created habitat for more than 2,900 species of vascular plants, 160 species of fish, 80 species of amphibians and reptiles, 400 species of birds and 85 species of mammals. There are also thousands of insect species and other smaller forms of life too numerous to be counted accurately. This collection of life, including the lands and waters on which it depends, forms the basis of Ontario's biodiversity.

What is biodiversity?

The Convention on Biological Diversity defines biological diversity as "the variability among living organisms from all sources, including terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems."

Scales of biodiversity:

Genetic Diversity — variability in the genetic composition of individuals within or among species and their populations.

Species Diversity — the number and variety of species found in a given area.

Ecosystem Diversity — the variety of ecosystems found within a region, where ecosystem means a dynamic complex of plant, animal and microbial communities and their non-living environment, interacting as a functional unit.

Landscape Diversity — the mosaic of interacting ecosystems. All of the above levels of biological diversity are integrated into landscapes. Ecosystems may be characterized by vertical relationships among organisms, air, water, soil and nutrients and ecological processes within a relatively homogeneous spatial unit — landscape diversity represents the relationship among such spatial units.

The loss of biodiversity is a global problem. Like other jurisdictions in North America, Ontario is experiencing a rapid decline in the abundance of species and in natural areas. The cumulative impacts of expanding urban areas, industry, forestry, pollution, fishing, farming, and the introduction of invasive species are among the most significant threats to Ontario's biodiversity.

> *... Ontario is experiencing a rapid decline in the abundance of species and in natural areas ...*

The Government of Canada is a signatory to the international Convention on Biological Diversity, formally ratifying it in 1993. Two years later, the federal government released the Canadian Biodiversity Strategy, which outlined a series of principles and strategic directions that were to serve as a guide for the provinces and territories to uphold Canada's commitment to conserve biodiversity.

In 1996, all the provinces and territories agreed, in a National Statement of Commitment, to implement the Canadian Biodiversity Strategy. Since that time, several provinces have developed their own biodiversity strategies to assist in this task. Ontario has still not developed its own strategy.

A Framework to Conserve Biodiversity

The ECO believes that the Ministry of Natural Resources should develop a series of integrated, province-wide strategies to address key biodiversity issues. These strategies should target specific areas in which action is required to conserve biodiversity, such as conserving protected areas and natural heritage features and functions, protecting species at risk, and addressing the threat of invasive species.

Biodiversity Strategy

In our 2001/2002 annual report, the ECO recommended that MNR develop a provincial biodiversity strategy in consultation with affected ministries, municipalities and stakeholders. MNR has taken no action since then to develop this strategy. But a comprehensive, coherent framework is needed for ministry programs and policies, including the following sub-strategies aimed at specific biodiversity issues.

Protected Areas Sub-strategy:

The loss of natural areas is one of the greatest threats to biodiversity worldwide, including within Ontario. A network of protected areas plays a fundamental role in conserving biodiversity, particularly at the landscape level. Although MNR has undertaken some useful large-scale initiatives, such as Ontario's Living Legacy, they do not cover the entire province. In our 2001/2002 annual report, the ECO recommended that MNR create a new legislative framework for provincial parks and protected areas, including conservation reserves, with the mandate of conserving biodiversity. The ministry stated that it accepted this recommendation, but that no review has been scheduled.

Natural Heritage Sub-strategy:

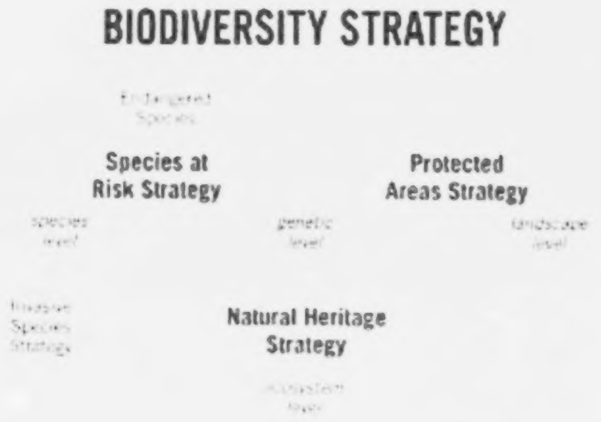
The conservation of natural heritage features, such as wetlands and forests, is essential to safe-guarding biodiversity at the ecosystem level. MNR does administer many policies and programs that address natural heritage issues (see the Ecological Land Acquisition Program, pages 96-97). However, the ministry has not developed a province-wide strategy that would effectively coordinate and deliver these policies and programs. (See also Natural Heritage Strategy for MNR's Southcentral Region, pages 98-100.)

Species at Risk Sub-strategy:

The protection and recovery of species at risk, such as the loggerhead shrike and the prickly pear cactus, are urgent areas of concern in the conservation of biodiversity (see Wolf Conservation Strategy, pages 139-143). The large number of species at risk is an indicator of the state of Ontario's biodiversity. MNR has committed itself to developing a Provincial Species at Risk Strategy by sometime in 2003, saying that the ministry intends to contact key stakeholders during the consultation process and to place the strategy on the Environmental Registry for public comment. (See Species at Risk, pages 139-143.) MNR has also identified internally the need to revise the *Endangered Species Act* to harmonize it with the federal *Species at Risk Act*.

Invasive Species Sub-strategy:

Non-native species, such as the zebra mussel and the round goby, are important threats to Ontario's native biodiversity. More than 160 types of invasive or exotic species are currently found in Ontario. In some cases, the presence of non-native species facilitates the establishment of other exotic species, causing what has been called the "invasional meltdown" of the Great Lakes. Although a handful of programs do exist to address specific invasive species, no province-wide strategy exists to guide action on this significant environmental issue. (See Exotic Species: Invading the Great Lakes Basin, page 76.)



ECO Comment

The loss of Ontario's biodiversity — its plants, animals and natural spaces — will continue unless the province takes concerted action. Although MNR's Statement of Environmental Values does make reference to biodiversity, the ECO believes that the ministry should formally recognize that one of its core functions is to maintain, restore, and protect Ontario's biodiversity.

MNR should develop a comprehensive biodiversity strategy to guide the sub-strategies targeted at specific biodiversity issues. As part of this overall framework, MNR should undertake a comprehensive assessment of its current policies, regulations and Acts, and enact appropriate changes to conserve the province's biodiversity. Ontario committed to such an assessment in its endorsement of the Canadian Biodiversity Strategy. Over the long term, a biodiversity strategy will need to guide and influence the regulatory structures overseeing the consumptive uses of natural resources, including forestry, fishing, farming, mining and tourism.

> ***... the loss of Ontario's biodiversity — its plants, animals and natural spaces — will continue unless the province takes concerted action ...***

The ECO believes that each of the integrated sub-strategies should contain a clearly identified vision, objectives, detailed courses of action, measurable targets and public reporting requirements. MNR should solicit public comment on the Environmental Registry in the development of each strategy. The ministry should also promote inter-ministerial cooperation in the development and implementation of the strategies to address these issues effectively.

The integrity of the province's natural environment is of great importance to the citizens of Ontario. The province has a responsibility to recognize the seriousness of this issue and develop an immediate course of action. *(For ministry comments, see page 205.)*

Update: Air Emissions Monitoring and Reporting

Over the past three years the Ontario government has introduced a program requiring facilities in the industrial, commercial, institutional and municipal sectors to report on their emissions of airborne contaminants. The Ministry of the Environment needs this information to create an inventory of province-wide emissions and to verify progress in reducing air pollution. As an additional benefit, the public can access information on contaminants being released to the air in their communities. In this reporting year, the ECO attempted to find out whether all the facilities subject to the reporting requirements have been submitting reports.

Facilities must report on their emissions of any of over 350 substances if they emit more than the threshold set by MOE. All facilities must submit annual reports; some are required to submit quarterly reports and smog season reports as well. The reports are submitted to MOE and must also be made available to members of the public. In May 2002, MOE created a Web site where the public may access the posted reports by searching for a specific facility or for all facilities within a municipality.

The requirements have been phased in over a couple of years. Reporting requirements came into effect for the electricity sector (Class A) on May 1, 2000; for other large source sectors (Class B) on May 1, 2001; and for facilities belonging to smaller source sectors (Class C) on January 1, 2002. The annual reports are based on the calendar year (except for 2001, which covered only May 1 – December 31) and are due on the following June 1. The Class A and B facilities, such as electricity generating stations, iron and steel manufacturers, petroleum refiners and chemical manufacturers, submitted annual reports for 2001, on June 1, 2002. Class C facilities, such as waste management services, quarries and auto body repair services, submitted their first annual reports, for 2002, on June 1, 2003.

MOE's estimates of the number of facilities that would be subject to the reporting requirements have changed over time. Before the Class A and B facilities submitted their first annual reports, the ministry stated that "in the first year, it is expected that 3,000-4,000 facilities will be reporting." But just over 2,000 facilities submitted annual reports for 2001, far short of the original estimate. MOE now estimates that 3,000-5,000 facilities are subject to the regulation overall, but has not developed a further breakdown of facilities by sectors or classes. Almost 3,000 annual reports were submitted by June 1, 2003, for the 2002 reporting year, and that number rose to over 4,000 by July 21, 2003. But MOE advised the ECO that the number is subject to change as ministry staff weed out duplicate reports — for example, where facilities may have submitted both paper and electronic reports. The ministry anticipates that it will have an accurate count and all of the reports loaded onto its OnAIR Web site for public viewing by September 2003.

The ECO attempted to find out whether MOE believes there are many more Class A or B facilities out there which should be reporting. The ECO asked MOE whether it has taken any action to inform large facilities which have not self-identified and reported that they are subject to the regulation. The ministry responded that facilities that have failed to meet the deadline for reporting are encouraged to submit their reports but are designated as late reporters. The ministry has found that a few large facilities have become aware of their reporting obligations through the activities the ministry has taken to inform the small sector facilities of their responsibilities. The ministry did not describe a formal plan to identify non-reporting facilities and to bring them into compliance.

The thousands of small sector facilities are likely less attuned to new provincial regulations, so we asked how the ministry was informing them that they were subject to these new rules. The ministry said that it had established a Stakeholder Workgroup comprised of industry, environmental and government representatives. Some of the members — for example, the Canadian Manufacturers and Exporters — represent small facilities and have provided information about the regulation to their members. The ministry also participated in approximately 25 training and information sessions and sent out over 12,000 faxes to facilities containing information on the regulation. Technical assistance is available through a help desk staffed by MOE and Environment Canada personnel, and information is available on the ministry's Web page.

The ministry held over 45 training workshops in 2001 and said that many of these were attended by Class C sector facilities, such as commercial buildings, health care, printing and small manufacturers. But those were held before the Class C sector facilities were even subject, and would only have attracted owners and operators who were already aware of the upcoming requirements. During the facilities' current reporting cycle, the ministry held only five general training sessions. In addition the ministry said it will be involved in over 20 training and information sessions in partnership with industry associations and the National Pollutant Release Inventory (NPRI) program of Environment Canada. Again, these sessions will reach facilities that also report to the NPRI and which are already somewhat knowledgeable about their reporting requirements. Based on observations and discussions with persons involved in Class C sectors during the ECO's 2002/2003 reporting period, the ECO is concerned that many Class C facilities are not aware of their reporting obligations.

Without the information from all subject facilities, MOE does not have a complete account of the source of contaminants and total emissions. This is essential information for making decisions to improve air quality and to assess progress towards air quality goals such as those set in the Anti-Smog Action Plan. Facilities that are complying with the requirements also want a level playing field. This reporting system is still relatively new in Ontario. The ECO recognizes that full penetration will take time, but is concerned that MOE has not articulated a plan to inform the regulated community and to ensure compliance. (*For ministry comments, see page 205.*)

Update: Creating and Conserving Electricity

The development of electricity generation capacity and infrastructure has played a key role in the development of Ontario's economy. The province's first electricity generating facilities date back to the late 1800s. Since that time, the province has developed facilities that generate electricity using waterpower, coal, oil, natural gas, wind, uranium and other natural resources. Every form of electricity generation has some degree of environmental impact — some greater, some lesser (see table below).

Generation	Generic Impacts
Nuclear Energy	Potential escape of radioactive substances from spent fuel waste in transportation and storage.
Coal or Oil	Some of the highest greenhouse gas, acid gas, particulate matter, smog precursor and toxin emissions of all the fossil fuels, per unit of electricity generated.
Natural Gas	Potentially significant emissions of greenhouse gases, acid gases and smog precursors, but generally much lower than those of coal or oil.
Waterpower	Ecosystem and habitat disruption, fish mobility constrained, conflict with recreational users, water quality degradation.
Renewable / Alternative, e.g.,	Varies according to generating technology; see examples below.
– wind	Mainly visual impact. Potential wildlife impacts/disruption.
– solar	Somewhat energy-intensive to produce some solar panels.

The electricity sector has significant ecological impacts, most of which arise far away from the consumer of electricity and from the point of consumption. For example, air emissions from Ontario's fossil fuel generators are often significant and widely dispersed. Ontario's largest coal-fired station, Nanticoke, released over 20 million tonnes of carbon dioxide, a greenhouse gas, and 86,500 tonnes of sulphur dioxide, an acid gas, in 2001. Collectively, Ontario's coal-fired stations accounted for almost a quarter of Ontario-based air emissions of mercury, a toxic heavy metal, in 1999. Coal-burning emissions can also lead to smog throughout southern Ontario and beyond.

Hydroelectric dams usually have serious impacts on both fish habitat and recreation. They create near-irreversible barriers for fish seeking spawning grounds and for people wanting to travel by watercraft like canoes or kayaks. Dams also impact heavily on riparian habitat — changes in flow can be devastating to wetlands, shoreline vegetation and the wildlife that inhabits these spaces. Interest in the potential of undeveloped waterpower sites in central and northern Ontario has been growing in recent years because of Ontario's growing electricity demand (see Water Management Planning Guidelines for Waterpower, pages 108-112, and *Lakes and Rivers Improvement Act*, pages 128-131).

Nuclear power creates concerns about the transportation, storage and safety of radioactive material that will persist well into the future. (Note that the mandate of the Environmental Commissioner of Ontario does not include the review of nuclear power issues, which fall predominantly under federal authority.)

Given this wide array of impacts, the ECO believes it is important to monitor not only the types of electricity generation that are being used, expanded or proposed, but also the efforts that are being made to curb demand — and whether consumers are being encouraged to use electricity more efficiently. More efficient use of electricity and moving to more benign forms of generation can limit or reduce the environmental impact of this sector, and make an important contribution toward sustainability.

Managing electricity generation and use to minimize environmental impacts is key to fulfilling the *EBR*'s primary goal, which is "to protect, conserve and, where reasonable, restore the integrity of the environment..." The ECO's last extensive review of the electricity sector appeared in our 1998 annual report, since legislation was then being passed that would lead to the opening of the electricity market to competition.

Reporting Year Developments

In the past reporting year 2002/2003, there were major developments in Ontario's electricity sector. In May 2002, the Ontario government moved ahead with its planned opening of the electricity market to competitors. Prior to this, most matters of supply, price and distribution of electricity were managed by the two main provincial electricity utilities, Ontario Power Generation and Hydro One, and by the Ontario Energy Board and municipal electrical utilities. Prior to May 2002, price stability originated from a price freeze first imposed in 1993; before the market opening on May 1, 2002, most customers were in effect paying a regulated price of 4.3 cents per kilowatt-hour (kWh). When the market opened, the commodity price of electricity – in effect, what the generator was charging — was free to float, going higher with demand, and falling when demand dropped.

A relatively hot summer in 2002 ensured that electricity demand was near record levels at times, in part because of space cooling demands. Throughout most of the summer, the hourly price of electricity ranged from 3¢–16¢/kWh. But on several occasions, price spikes of 70¢ or more per kilowatt hour occurred. Most consumers had been accustomed to paying about 4.3¢/kWh for electricity in the months leading up to May 2002. After the market opened, some residential electricity bills were soaring into the hundreds of dollars per month. However, the longer-term average price has been much more modest — over the one-year period May 2002 to May 2003, it was about 6.2¢/kWh, according to the Ministry of Energy.

When consumer demand regularly becomes capable of taking up all the available supply from within Ontario, producers and consumers are faced with few options — import electricity to meet needs, build more generating capacity to meet needs, or trim demand by conserving electricity. Importing can be an option, but can be expensive and is limited by infrastructure. New generation capacity can help, but it takes time to build and can also be expensive. Conservation can be very effective, but that requires that millions of consumers take action across the province. In November 2002, the Ontario government announced legislation that included measures designed to promote conservation and new electricity generating capacity, but which also included measures that could potentially undermine conservation.

Bill 210 – The Electricity Pricing, Supply and Conservation Act

The introduction of Bill 210 was the most significant electricity sector development the ECO reviewed under its *EBR* mandate in 2002/2003. For many consumers, the bill capped the commodity price of electricity at 4.3¢/kWh for three years. Bill 210 also advanced measures to encourage the use of renewable and alternative energy and to promote electricity conservation among consumers. (For more detail on Bill 210, see pages 101-104, and the associated write-up in the Supplement to this annual report.)

Advancing renewable and alternative energy and promoting conservation are significant environmental protection measures. In several annual reports released between 1998 and 2002, the ECO recommended that the Ministries of Energy and Environment develop programs and polices to advance energy efficiency, conservation, and the adoption of renewable energy. To ensure that Ontarians have access to safe, reliable and environmentally sustainable energy supplies, the ECO recommended in our 1998 report that the Ministry of Energy should:

- establish and carry out programs to reduce consumer energy demand and clearly support and promote both public and private sector energy efficiency initiatives.
- set targets for the increased production of renewable energy, and develop and implement programs that will encourage the development of renewable energy in the province.
- report annually on progress in meeting its goals and targets for energy efficiency and renewable energy.

A number of measures in Bill 210 will support these recommendations. For instance, Bill 210 has created incentives for purchasing energy efficient appliances, for generating electricity from renewable and alternative energy sources, and for the purchase of equipment for deep lake cooling projects. The ECO is pleased to see numerous measures of this type advanced in this reporting year, and believes that new, more environmentally benign sources of generation would make a vitally needed contribution to Ontario's electricity sector.

Ontario's Present and Future Generating Mix

Currently, the generating mix in Ontario is dominated by three main generating technologies — nuclear, fossil fuel (coal, oil, natural gas) and hydroelectric. The category "miscellaneous" includes wood and waste-fuelled facilities as well as wind generation.

Ontario's total installed generating capacity in early 2003

	No. of Stations	Total, MW	Portion
Nuclear	4	10,836	35.5%
Coal	5	7,546	24.7%
Oil/Gas	24	4,416	14.5%
Hydroelectric	59	7,636	25.0%
Miscellaneous	2	66	0.2%
Total	**94**	**30,500**	**100.0%**

Source: IMO 10-year Outlook, March 2003. Note: the table above includes facilities that convey electricity onto Ontario's (IMO-controlled) electricity grid. These facilities generate most of the electricity consumed in Ontario. In addition, there are numerous (generally smaller) facilities using water, wind, solar or other forms of power to generate electricity that is not conveyed onto the IMO-controlled grid.

Developments that could increase supply beyond that listed above include the scheduled return to service of Bruce A nuclear units (1540 MW) in June 2003 (the table above does not include this capacity). The capacity of the Pickering A nuclear units are included in the table, though they were not expected to start returning to service until summer 2003. After Bruce and Pickering have returned to service, no additions of nuclear power to Ontario's electricity system are forecast. Two new natural gas-fired facilities, ATCO-Brighton Beach (578 MW) and Imperial Oil (98 MW) are expected to come on line in 2004. Though there are numerous smaller sites with hydroelectric potential in Ontario, sites for large-scale hydro-electricity development are almost tapped out — the Beck III proposal on the Niagara River is expected to be the last large hydro development in Ontario.

Developments that will decrease the supply in the years ahead include the planned phase-out of coal-fired electricity generation because of environmental considerations. In fact, the Independent Electricity Market Operator (IMO), the agency that oversees Ontario's wholesale electricity market, removes the capacity of the Lakeview Generating Station (1,148 MW) from its 10-year modeling forecasts as of 2005. (This reflects the government's commitment that the Lakeview Station will cease burning coal by April 1, 2005.) Further, in April 2003, the Ontario government committed to phasing out all other coal-burning at electricity stations by 2015.

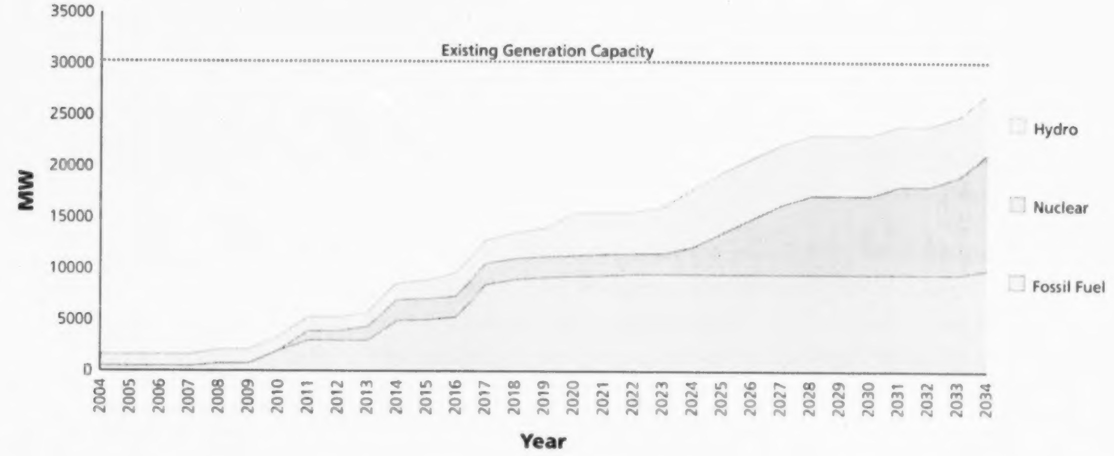
Any developments that decrease the electricity supply highlight an important issue — the ability of Ontario's electricity system to accommodate future demand growth. The IMO estimates the average provincial growth rate at 1 per cent per year, but in certain areas in and around the Greater Toronto Area, demand is growing at faster rates. (The effect of growth can be significant — at a 2 per cent growth rate, for example, overall demand would double in about 35 years, leading to the need for roughly doubling the supply of electricity over the same period.) Within a decade, according to the IMO, Ontario could face a shortfall of 2,500 MW, unless new capacity materializes or conservation begins to take place.

On top of growth pressures, many of Ontario's aging electricity stations and dams will need replacement or major refurbishing. By the year 2020, about half of Ontario's generating capacity will exceed its nominal service life, according to the IMO (see the graph on page 61). These developments raise many questions: How will the combined pressures (demand and age) be managed? What will replace existing infrastructure? New power developments will surely factor in, but what types — natural gas, wind turbines, hydro-electric or solar installations? Can new installations and growth be accommodated within Ontario's air quality commitments like the Anti-Smog Action Plan (see Ontario's Anti-Smog Plan, pages 62-64)? And how large a role will factors such as demand-side management, conservation techniques, efficiency gains, load shifting and co-generation play?

Rate Cap and Demand-side Management

Some market analyses suggest that conservation, renewable energy, and natural gas-fired generation would be more financially attractive in the market place if the commodity price of electricity were somewhat higher than the current 4.3¢/kWh that applies to many consumers as a result of Bill 210. Consumers would begin to seek conservation measures if electricity costs begin to exceed the cost of such measures. Cleaner forms of electricity generation could be more readily financed if the average price of electricity were slightly higher. This approach could still form the basis of a conservation and renewable energy strategy in the future, since Bill 210 also includes provisions to remove controls put on the electricity market, and since the price cap established by Bill 210 is set to expire in 2006.

Generating Capacity and Nominal Service Life



About half of Ontario's generating capacity will exceed its nominal service life by the year 2020 (adapted from *10-year Outlook*, IMO, March 2003).

ECO Comment

A substantial amount of conservation, load management, fuel switching and adoption of renewable sources will continue to be required in the years ahead to contain the environmental impacts of electricity generation in Ontario, especially in the face of forecast demand growth and the planned phase-out of coal-fired generating facilities. The Ontario government has diminished the economic incentive for conservation for those consumers covered by the rate cap of Bill 210; however, this rate cap is set to expire in May 2006. As well, large volume consumers who are not covered by the rate cap are still subject to the market price for electricity and therefore have an incentive to conserve electricity.

Bill 210 gives the Ministries of Energy, Environment and Natural Resources and the Management Board Secretariat a solid framework for advancing the adoption of renewable energy, conservation, and fuel switching — if the ministries take full advantage of the new legislative provisions. These ministries will have to devote more financial and human resources in the future to ensure that renewable energy and conservation of electricity play their part. The ECO will continue to monitor the promotion of renewable energy and electricity conservation in Ontario. *(For ministry comments, see pages 205-206.)*

Update: Ontario's Anti-Smog Action Plan

The Ministry of the Environment laid out Ontario's Anti-Smog Action Plan (ASAP 1998) in January 1998, committing its signatories to the goal of reducing ground-level ozone and to a series of reduction targets for specific constituents of smog. The plan grew out of a smog-reduction planning process begun in June 1996, and is characterized as "an evolving document." MOE released a first progress report, ASAP 2000, in August 2000.

The ministry's second progress report, *Ontario's Anti-Smog Action Plan: Progress through Partnership* (ASAP 2002), released during this reporting year, provides an update on progress made by ASAP partners toward the smog-reduction goals, which are to be achieved through a range of both regulatory and voluntary actions. ASAP partners include government groups, industry and non-governmental organizations, as well as academics/researchers, all of whom have declared their commitment to the plan's goals by signing the Anti-Smog Accord. The accord presently has over 50 signatories.

The 2002 ASAP progress report has five sections, described below:

- Section 1.0 — The goal of ASAP is "to achieve, by 2015, a 75 per cent reduction in the average number of times the 80 parts per billion (ppb) one hour ozone Ambient Air Quality Criterion (AAQC) is exceeded." The baseline is the average number of annual exceedences from 1990 to 1994. In order to achieve this goal, the plan commits to a province-wide emission reduction target of 45 per cent from 1990 levels for both nitrogen oxides (NO_x) and volatile organic compounds (VOCs) by 2015. ASAP 1998 endorsed an interim reduction in particulate matter (PM_{10}) of 10 per cent by 2015, recognizing that a comprehensive understanding of the sources of PM_{10} is needed before effective reduction strategies could be developed. ASAP also commits to measuring progress against the sulphur dioxide (SO_2) target established under the Canada-Wide Acid Rain Strategy for Post-2000, since this pollutant is a "major precursor leading to the formation of fine particulate matter." As well, the Ontario government has proposed to advance the deadline for NO_x and SO_2 reduction from 2015 to 2010.
- Section 2.0 profiles the smog-reduction activities of industry, transportation, municipal, provincial (MOE and the Ministry of Transportation), federal (Environment Canada), non-governmental (e.g., Pollution Probe) and ASAP research partners (e.g., Centre for Research in Earth and Space Technology). It describes a number of MOE's smog-reduction initiatives that involve ASAP stakeholders, such as emissions caps and emissions reduction trading for the electricity sector, mandatory monitoring and reporting of emissions, and smog advisories and watches.

- Section 3.0 quantifies emissions and reductions of key constituents of and precursors to smog from a range of emitters and compares them to the established targets. A key feature is a series of four tables – one each for NO_x, VOCs, SO_2 and $PM_{2.5}$ — which present data on current and estimated future emissions. The data are broken down by source type (i.e., point versus area), sector and year. Each table includes totals for each year considered, allows for a comparison of current and estimated future emission reductions to reduction targets for each pollutant, and provides a gap analysis under both 2010 and 2015 target date scenarios.

  Although the tables reveal that emission loadings of all four smog-causing pollutants have declined since 1990, they also show that Ontario is not on track for meeting its reduction targets for any of the pollutants (with the possible exception of NO_x, under a 2015 deadline scenario). "More work may be required to achieve anti-smog targets," ASAP 2002 concedes.
- Section 4.0 describes a number of air quality initiatives undertaken by ASAP partners outside the ASAP forum, including MOE's efforts to update air standards and activities to support the US EPA's smog-control plan in US courts.
- Section 5.0 provides a brief recapitulation of key ASAP efforts and progress.

ECO Comment

MOE and ASAP partners are to be commended for having significantly improved the way in which they quantify and report on progress toward their smog-reduction targets. As noted in the ECO's 2000/2001 annual report, ASAP 2000 "did not clearly compare actual smog reduction achievements to stated targets." ASAP 2002 does. The four tables and accompanying text found in the report constitute a comprehensive science-based analysis of emissions and emission reductions. The thorough reporting of progress against targets gives the reader a clear picture of the degree to which ASAP partners are on track. While the first progress report itemized emission reductions in a confusing way — some as an absolute quantity, others as quantity per year, and some simply as a percentage — ASAP 2002, in contrast, describes emissions reductions in a consistent way. The tables in Section 3.0 present emissions, targets and gaps in absolute terms. The text also describes all emissions, and changes in emissions, in absolute terms (and includes percentages in some cases). Such consistency makes it easier to compare the results across sectors and years.

However, while MOE does refer to its new mandatory monitoring and public reporting regulation for small and large emitters (including electricity generators, industries, municipalities and institutions), the ministry could have performed an important service by providing information on when and how the emissions data generated by facilities can be publicly accessed. (This data can be accessed through MOE's Air Emissions Monitoring Web site — http://www.ene.gov.on.ca/environet/onair/splash.htm.) The second round of annual reports for large companies and the first round of reports for small companies are due by June 1, 2003.

The ECO commends MOE and ASAP partners for having increased their commitments to smog-reduction activities between 1998 and 2002. But this latest progress report shows that ASAP partners are not yet on track to meeting their stated targets, much less any more stringent targets that may be adopted in the future. In its Registry notice on ASAP 2002, MOE recognizes that existing voluntary measures and regulations will not be enough to meet those commitments.

There are a number of ways MOE could improve public access to information about ASAP. First, information about ASAP has not been provided to the public as frequently as originally intended. In January 1998, ASAP partners committed to release updates or progress reports on an annual basis, but only two progress reports have been published since that time. Second, the ASAP 2002 decision notice on the Environmental Registry did not provide a link to the report.

The ministry could also have used additional means to alert the public to the release of this report. Even though the ministry issued two smog-related media releases on December 20, 2002 — the same day that ASAP 2002 was posted on the Registry — MOE did not announce the publication of ASAP 2002 with a media release. MOE also failed to advertise ASAP 2002 on its Internet homepage and on the Air Quality Ontario Web site. Nevertheless, ASAP 2002 is a useful progress report. (For further information on ASAP 2002, refer to pages 91-96 in the Supplement to this annual report.)

Update: Smart Growth

Smart Growth is the government's vision for promoting and managing growth in Ontario. The province is developing smart growth strategies that consider transportation, land use, housing and the environment. In southern Ontario, these strategies will address issues such as preserving natural areas, reducing traffic gridlock, and ensuring adequate infrastructure. In northern Ontario, the priority issue is promoting and maintaining economic growth. Throughout this reporting year, the government continued to work on its Smart Growth initiative, launched in January 2001.

In 2002, the government appointed five Smart Growth Panels to provide advice to the province in developing long-term — 15 to 30 years — strategies in each of five zones (Western, Central, Eastern, Northwestern and Northeastern). The Smart Growth Panels are supported in their work by the Smart Growth Secretariat of the Ministry of Municipal Affairs and Housing, and Zone Committees of regional staff from other ministries relevant to Smart Growth. They include the Ministries of Agriculture and Food; Energy; Enterprise, Opportunity and Innovation; Environment; Finance (Ontario Superbuild Corporation); Natural Resources; Northern Development and Mines; Transportation; and Tourism and Recreation, as well as the Ontario Native Affairs Secretariat.

The Central, Northeastern and Northwestern Panels have submitted final reports to the Minister of Municipal Affairs and Housing. The minister asked the panels to consult stakeholders and hold public open houses to solicit feedback on these draft recommendations before submitting final advice. The public consultations were held in March and April 2003. The Western and Eastern Panels were established last and were still in the early stages of the process in May 2003.

Central Ontario Panel

The Central Ontario Panel was asked to focus on the priority issues of gridlock and waste management. The Panel created sub-panels to look at each issue, plus a sub-panel to work on the overall strategy. The Central Ontario Panel submitted its interim advice on addressing gridlock in August 2002, focusing on short-term actions such as increasing transit ridership through capital investment, improved service and incentives; improving integration among transit providers; and revising funding formulas. The Panel also addressed the long-term need for an inter-regional transportation network and transit-supportive land use planning.

The Central Ontario Panel submitted its final report in April 2003, stating that the priority was to direct balanced growth within existing urban and settlement areas to support compact development. The Panel concluded that with the expected population increase there will be a need to expand urban boundaries, but recommended that urban expansions be planned in advance in accordance with Smart Growth strategic directions to avoid both "leap-frog" settlement or compromising the natural heritage system and unique agricultural lands identified for protection. They emphasized protection of resources such as agricultural lands, forests, water sources, mineral aggregates and natural heritage features and the identification of a natural heritage system, including the highest level of protection for the Oak Ridges Moraine and Niagara Escarpment. The Panel recommended making transit the first priority for transportation investment, specifically the 10-year GO Transit budget and the rapid transit busway. The goal for waste management was to reduce significantly the dependence on exporting municipal waste to the United States over the next five years and to eliminate this dependence in 10 years.

The Panel also had suggestions for implementing its recommendations, advising that the province should:

- establish an accountable stakeholder body, advisory to the province, with the authority and resources to coordinate implementation of elements of a Provincial Smart Growth strategy that would cross municipal boundaries.
- establish a body or provincial facilitator within the provincial government with the authority and resources to coordinate and ensure that the policies of all provincial government ministries support Smart Growth goals and strategic directions.
- enact legislation that would give appropriate status to the Smart Growth strategy.

The Panel also pointed out the need for further mapping and analysis of natural heritage, agriculture and other resources, and the need for both transportation and waste management master plans.

Northwestern Panel

The Northwestern Panel submitted its final report to the minister in May 2003. Recommendations are clustered under eight specific action items:

- designating a "Cluster of Excellence" for forestry and forest products.
- attracting and retaining youth and young families.
- pursuing new opportunities for Crown-land development.
- supporting and encouraging the expansion of businesses.
- promoting new opportunities for First Nations' traditional lands.
- expanding the all-weather road network.
- improving the Trans-Canada and other major highways.
- improving Internet connectivity.

Northeastern Panel

The Northeastern Panel submitted its final report to the minister in May 2003. Recommendations are grouped under the following specific action items:

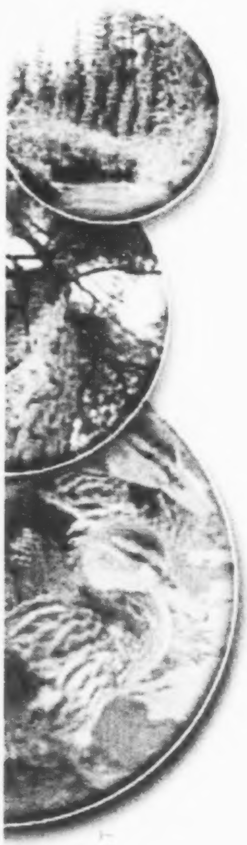
- revitalizing the Crown-land development process.
- making better use of infrastructure.
- establishing transportation priorities.
- improving connectivity.
- developing strategic business directions for key sectors.
- promoting value-added opportunities in forestry.
- designating a "Region of Excellence" for mining and mining products and services.
- developing tourism opportunities.
- pursuing agriculture opportunities.

ECO Comment

In our 2000/2001 annual report, the ECO expressed concern that consultations and implementation of Smart Growth initiatives had proceeded throughout 2001 without adequate notice on the Environmental Registry. This concern has been addressed, since MAH posted proposal notices on the Registry for each of the Panels, informing the public of open houses and a 30-day comment period on the Smart Growth Panels' draft advice documents as they were released. The Ministry of Transportation also posted a policy proposal in March 2003 for a draft report supporting the Smart Growth strategy.

The government has sustained its commitment to the Smart Growth initiative during this reporting year, and the Panels have made substantial progress. The ECO will track progress and review ministry decisions that flow from the Smart Growth initiative. *(For ministry comments, see page 206.)*

Part 4: Ministry Environmental Decisions



Each year the Environmental Commissioner of Ontario reviews a sample of the environmentally significant decisions made by the provincial ministries prescribed under the *Environmental Bill of Rights*. During the 2002/2003 reporting year, 1,636 decision notices were posted on the Environmental Registry by Ontario ministries. Decision notices were posted for the following:

- 35 Policies
- 11 Acts
- 24 Regulations
- 1,555 Instruments

The extent to which the ECO reviews a ministry decision depends on its environmental significance and the public's interest in the decision. The ECO undertook detailed reviews of the 26 decisions that appear in Section 4 of the Supplement to this annual report. The ECO has also summarized and highlighted 13 of these decisions in the following pages of this report.

The *Nutrient Management Act, 2002*

The *Nutrient Management Act (NMA)*, enacted June 27, 2002, defines nutrients as any materials applied to land to improve the growth of agricultural crops, including fertilizers, organic materials, biosolids, manure, septage, and sludge from pulp and paper processing.

The *NMA* was introduced as Bill 81 on June 13, 2001, during the inquiry into the Walkerton tragedy, headed by Justice O'Connor, in which seven people died and thousands became ill due to drinking water contaminated with *E. coli*. Justice O'Connor noted that although the source of the *E.coli* was agricultural, the farming practices in the area of the contaminated well were consistent with the management practices of the time. However, Justice O'Connor concluded, as part of a multi-barrier approach to providing safe drinking water, the source of the water must be protected, and noted that there was considerable overlap between managing nutrients and protecting drinking water.

The *NMA* describes the broad requirements – such as roles and responsibilities — for nutrient management. Detailed requirements, such as document content, setbacks for spreading, etc., will be in the form of regulations. The draft regulations were published on the Environmental Registry in December 2002, and have been subject to intense discussion between the farming community and the Ministry of Agriculture and Food.

Under one proposed regulation, farmers who have livestock that generate nutrients (manure) will be required to have nutrient management strategies (NMSs) that describe what nutrients will be generated and how they will be used. Municipalities and pulp and paper mills, because they generate sewage sludge and other biosolids, will also be required to prepare NMSs. Under the proposed regulation, nurseries and farmers who grow crops and apply nutrients to their land will be required to have nutrient management plans (NMPs) that describe when, where and how the nutrients will be spread.

The farming community generally supports the concept of nutrient management plans as long as training and funding assistance is provided to offset any capital cost improvements, such as new manure storage facilities necessary to comply with the legislation. There is widespread concern that small agricultural operations may have to stop farming if they don't have the resources to comply with the regulations.

In response to public consultations, the government announced in March 2003 that significant changes were being made to the proposed regulation. The final regulation, filed as O. Reg. 267/03 on June 30, 2003, will initially be applied "to new livestock farms and expanding large livestock farms. Existing large livestock farms would be covered by regulations in 2005." In addition, Budget 2003 indicated that "no action will be required of ongoing small farms until consultations on a manageable and affordable implementation of the Act are completed and funding programs established."

In the past, the province has relied on voluntary programs such as training, technology transfer, and Environmental Farm Planning, and has offered a variety of cost-sharing incentive programs, including Healthy Futures for Ontario Agriculture, to promote best management practices. The *NMA* regulations for some types of farms will replace these best management practices with compulsory, enforceable regulations. Voluntary best management practices will continue to be used for other types of farms. Under the Act, regulations can be created for more than 26 specific subject matters, including the size, capacity, location and construction of buildings that store nutrients or house farm animals, and the time and manner in which nutrients may be applied to lands.

According to the draft regulations, each agricultural operation will be classified into one of nine categories based on the nature of the operation, e.g., hog farm, crop farm, etc., and on the amount of nutrients generated and received. The agricultural operation will then be required to comply with the regulations specific to its category. Larger livestock farms would require government approval, while smaller operations could prepare their own plans and strategies.

Although neither the *NMA* nor the draft regulations limit the number of animals on a farm, the maximum number of animals will be determined by the farm's ability to store its nutrients properly and by the availability of land on which to spread them. If a livestock operation does not have sufficient land to absorb the nutrients that it generates, based on its soil type, location of watercourses and wells, setbacks and other considerations identified in the regulations, it will have to arrange with other landowners to receive the nutrients. Otherwise, the farmer will need to reduce the number of animals. Similarly, municipal waste water treatment plants and pulp and paper mills will be required to find farmers willing to take their biosolids. OMAF has acknowledged that some regions of Ontario may not have sufficient land on which to apply all of the nutrients generated locally. For example, farmers in southwestern Ontario may face significant challenges because of the number of intensive livestock operations in the region.

Under the *NMA*, municipalities will not be allowed to implement by-laws that address the same topics covered by the *NMA* or its regulations. In the past, in the absence of clear provincial laws, municipalities have had the authority to enact by-laws in response to the public's concerns regarding nutrient management and large agriculture operations. Today, it is estimated that there are 70 local by-laws in place. These by-laws have restricted the activities of farming operations and have resulted in farms across the province being subject to inconsistent rules. Farmers whose fields spanned more than one municipality may have had to abide by different by-laws depending on which municipality a field was in. Although there is widespread support from the agricultural community for provincial rules that will prohibit local by-laws, other stakeholders, including some municipalities and environmental groups, fear that progress made by some municipalities to improve their watersheds may be reversed under the *NMA* and that municipalities will no longer be able to protect sensitive sites, including aquifers.

Since 1988, farmers have been protected from lawsuits from the public related to disturbances, such as odour, dust and noise, under the *Farming and Food Production Protection Act* (and its predecessor law), as long as their activities were determined to be "normal farm practices." The *NMA* clarifies that farmers who comply with *NMA* regulations will continue to be protected. As a result, neighbours will not be able to sue farmers for disturbances such as odour or dust when farmers spread nutrients on their land in compliance with *NMA* regulations.

OMAF will be responsible for administering most aspects of the *NMA*, including approval of the NMPs and NMSs. However, one of the most contentious issues during the public consultations was whether OMAF or the Ministry of the Environment should be accountable for ongoing enforcement of the *NMA* and its regulations. For the most part, the farming community thinks that OMAF should be wholly accountable, since it has expertise in nutrient management and farming and a positive, cooperative relationship with farmers. They are concerned that MOE's approach is punitive and that the ministry lacks expertise in agriculture. On the other hand, environmental groups recommended that MOE be wholly accountable for enforcement because of its independence and its expertise in enforcement. OMAF initially indicated that MOE would be responsible for enforcement, but continued concern from agricultural groups has caused the government to review this decision. In March 2003, OMAF announced that it "would be the first point of contact for on-farm nutrient management issues, including monitoring," but that MOE would have the "ultimate authority to ensure compliance with the regulations through investigations and enforcement." MOE will continue to review and approve certificates of approval related to land application of biosolids.

The *NMA* allows for regulations that require filing of NMPs and NMSs in an electronic format. This will allow OMAF, MOE or other agencies to determine the amount of nutrients being applied in a particular region, identify the best locations for testing water quality, and differentiate between agricultural sources and other dischargers – for instance, industry and sewage treatment plants. A number of farming groups are concerned, however, that NMPs and NMSs may contain confidential business data, while others have argued that NMPs should be public documents so that the public has the opportunity to verify for themselves whether or not farmers are following their plans.

ECO Comment

In our 1999/2000 annual report, the ECO recommended that intensive livestock operations be subject to the same approvals, monitoring and compliance mechanisms as other industries. The *Nutrient Management Act* fills a regulatory gap in Ontario and provides consistent province-wide rules. It establishes a framework for applying nutrients to improve crop growth and reinforces the notion that appropriate nutrient management is an important part of sustainable agriculture and environmental protection. Adequate funding is necessary if the *NMA* is to be successfully implemented, and the ECO supports tying the implementation dates of new regulations to the availability of funding. In addition, the ECO believes that ongoing, objective and timely enforcement is an important component of the legislation in order to reassure the public that water quality is being protected. The ECO will be reviewing the roles of OMAF and MOE with respect to monitoring, investigation and enforcement when additional information becomes available.

The ECO commends OMAF and MOE on the extensive public consultations that took place during the development of Bill 81, and which have continued with the draft regulations. The ECO has repeatedly urged OMAF to prescribe the *NMA* under the *Environmental Bill of Rights*. If it is not, certain *EBR* rights may not be available to the public, including applications for review, investigation or leave to appeal, as well as the right to sue for harm to a public resource. OMAF has indicated that more time is required in order for the ministry to understand the implications of prescribing the Act under most sections of the *EBR*. In the interim, the ECO urges OMAF to prescribe the *NMA* under s.16 of the *EBR* so that the Act's new regulations are subject to notice and comment on the Environmental Registry. The ECO will be reviewing the regulations in our next annual report.

The *EBR* also provides a way for NMPs and NMSs, which are instruments, to be classified and posted on the Registry so that the public can comment on them. The ECO urges OMAF to prescribe instruments for large livestock operations and biosolids under the *EBR*, since concerns regarding water quality will not diminish unless the public can participate in the decision-making process, and unless the regulatory system is transparent.

The proposed central nutrient management registry, a critical component of the *NMA* framework, should include all NMPs and NMSs. While the ECO recognizes that there may be business data in the new registry that should remain confidential, it is essential that much of the data be publicly available so that decision-making remains transparent and ministries are held accountable for their decisions on NMPs and NMSs.

Although the *NMA* has the potential to be part of the multi-barrier approach to water quality protection recommended by Justice O'Connor, the Act does not provide watershed-level protection of drinking water sources by itself, and OMAF and MOE have never made this claim. In April 2003, the Advisory Committee on Watershed-based Source Protection Planning submitted its report to the government. The purpose of the Committee is to provide advice and direction to the government leading to the development of a provincial framework that will protect Ontario's drinking water sources. The ECO is encouraged that the government has recognized that some key watershed issues remain unresolved, and will continue to follow developments. *(For ministry comments, see page 206.)*

The New Canada–Ontario Agreement on the Great Lakes

The Canada–Ontario Agreement Respecting the Great Lakes Basin Ecosystem (COA), signed on March 22, 2002, commits the federal and provincial governments to work together "to understand, restore and protect the environmental quality of the Great Lakes Basin ecosystem." Led by Environment Canada (EC) and Ontario's Ministry of the Environment, COA defines roles and responsibilities for cleaning up the Great Lakes Basin. It applies to the five Great Lakes, the waters that drain into them, and the St. Lawrence River from Lake Ontario to the Ontario-Quebec border. The 2002 COA replaces the 1994 Agreement, which expired in April 2000.

By the early 1970s, primarily due to phosphorus-loading, Lake Erie was thought to be a "dead" lake. In response, in 1972, Canada and the United States signed the Great Lakes Water Quality Agreement (GLWQA), which required governments, industry, agriculture and citizens to clean up the Great Lakes Basin. Since then, COA has set out the means by which both Ontario and Canada must meet their commitments under the GLWQA.

The GLWQA, which is overseen by the International Joint Commission (IJC), has been revised several times and now includes requirements for virtually eliminating persistent toxics in the Great Lakes, such as PCBs and dioxins and for reducing phosphorus-loading. The Agreement also calls for addressing concerns such as runoff from land, contaminated sediment, airborne pollutants, contaminated groundwater and non-native invasive species. Remedial action plans must also be prepared for Areas of Concern (AOCs), i.e., specific areas where there has been a loss of "beneficial uses," including restrictions on fish consumption, bird or animal deformities, undesirable algae and beach closings. Sixteen of the 43 AOCs are located in Ontario.

Prior to the 2002 COA, beneficial uses had been restored to only one Canadian AOC — Collingwood Harbour. The 2002 COA commits Canada and Ontario to restoring beneficial uses to at least two more AOCs. As of October 2002, this goal had been achieved for the Severn Sound AOC. The 2002 COA also requires the completion of all required activities in the remedial action plans in at least six AOCs and progress on remedial action plans for the remaining AOCs.

COA defines who will provide leadership — whether the federal or provincial government or both — for each of the 16 AOCs. And although the 2002 COA indicates that funding will be provided to the agricultural community, municipal and regional planners, and local organizations, there are no specific details on how much funding will be available, and when and how to obtain the funding.

Under the 2002 COA, Canada and Ontario have committed to providing the resources needed to implement the Agreement for a five-year period. A Management Committee, co-chaired by EC and MOE, is responsible for delivering on these commitments, and for publishing a progress report and State of the Lakes report every two years. A stakeholder advisory group has also been formed in response to widespread concern about the lack of public involvement in Management Committee decision-making.

SIGNING PARTNERS to the 2002 COA

FEDERAL DEPARTMENTS	PROVINCIAL MINISTRIES
Environment Canada	Ministry of the Environment
Department of Agriculture and Agri-food	Ministry of Natural Resources
Department of Canadian Heritage	Ministry of Agriculture and Food
Department of Fisheries and Oceans	
Health Canada	
Natural Resources Canada	
Department of Public Works and Government Services	
Transport Canada	

The 1994 COA commitments to reduce persistent bioaccumulative toxic substances — for instance, to reduce mercury emissions by 90 per cent by 2000 – have not been achieved. Thus, the 2002 COA continues to work toward their virtual elimination, with priority given to PCBs, mercury, dioxins and furans. Commitments have been made to destroy all PCBs in storage by 2008 and to phase out PCBs still in service.

The 2002 COA also recognizes the impact of smog and other pollution sources on water quality, with commitments to reduce air pollutants and to conduct research on contaminated sediment. Targets have been set to reduce sulphur concentrations in gasoline, to 30 parts per million, and in diesel, to 15 parts per million. Timelines to reduce emissions of nitrous oxide and volatile organic compounds will be accelerated, although no specific targets have been set (for additional information, see pages 62-64 on Ontario's Anti-smog Plan). Canada has committed to conducting research on the impact of endocrine-disruption substances, and Ontario has committed to the development of a nutrient management policy to control land application of biosolids and septage (see pages 68-72 on the new *Nutrient Management Act* for additional information).

The 2002 COA also includes several commitments regarding ship-source pollution. For example, Ontario will monitor invasive species and develop educational materials. Canada will implement the Sea Lamprey Control Program and existing ballast water treatment. Research will also be conducted into new treatment methods for ballast water and the impacts of invasive species.

A joint federal-provincial information management system will also be developed. The system has the potential of improving understanding of the Great Lakes Basin and providing earlier detection of changes and trends, which will result in better and more timely decision-making.

ECO Comment

In our 1999/2000 annual report, the ECO reported on the provincial government's performance under the 1994 COA and concluded that "most targets were still unmet by the time the agreement expired, especially those targets with direct impacts on the environment." Several reasons were proposed as contributing factors: funding and staffing cuts, targets set without identifying who was accountable and without measurable performance indicators, and inadequate project management and quality control. The ECO is concerned that some of the factors that hampered progress under the 1994 COA have not been adequately addressed and could limit achievement of the goals of the 2002 COA. As well, under the 1994 COA, the ECO found that the progress reports were "largely self-congratulatory in tone" and lacked clear statements regarding progress and the barriers encountered. An objective analysis of progress is necessary to ensure transparency and to provide greater assurance of progress.

The ECO is concerned that there are no specific funding commitments, and that the funding itself will not be sufficient. For example, the provincial government spent $23 million to restore one AOC – Severn Sound – but has committed to investing only $50 million to clean up the Great Lakes over the next five years. With 15 AOCs still needing attention, it is reasonable to expect that AOC remediation activities alone will cost significantly more than $50 million. Without adequate resources and firm ongoing funding commitments from MOE and the other provincial signees, the ECO is concerned that these goals will not be achieved.

During the public consultation on the draft COA, concerns were raised that measurable targets were not always provided, which, in effect, removes any basis on which government performance can be objectively measured. Environment Canada has since advised the ECO that measurable targets, and the government units responsible for meeting them, will be clearly identified in the 2002 COA workplan, and that a summary version of the workplan will be published for public viewing.

The 2002 COA is an important step in advancing the rehabilitation of the Great Lakes Basin, and the ECO is encouraged that prior concerns regarding targets and accountability are being addressed. However, the ECO is concerned that commitments to combat invasive species do not reflect the seriousness of the problem. In February 2003, the IJC advised the federal government that invasive species are now the number one threat to the economic and ecological health of the Great Lakes. Although Canada and the U.S. are spending billions of dollars combating zebra mussels and sea lamprey, new invasive species such as the round goby and the spiny water flea continue to enter the Great Lakes. The ECO believes that Canada and Ontario should develop a coherent strategy specifically to deal with invasive species. (See also Creating a Biodiversity Framework for Ontario, pages 49-53.) Current remedial efforts will be undermined unless effective and aggressive control measures are taken to stop the entry of new invasive species and to limit the impact of existing species. *(For ministry comments, see pag 206.)*

Recommendation 4

The ECO recommends that the provincial government ensure that sufficient funds are available to achieve the results defined in the Annexes to the 2002 Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem.

Exotic Species: Invading the Great Lakes Basin

What does a ship exchanging ballast water in the Great Lakes have in common with a flood at an Arkansas fish farm or the importation of wood crates? Each has resulted in the introduction of an invasive species into the Great Lakes Basin. Invasive species include non-native fish, insects, mammals and mollusks that out-compete native species for habitat and food. Successful invaders, sometimes called exotic species, are usually very prolific and have few natural predators.

Since the 1800s, over 160 invasive species have invaded the Great Lakes Basin; in other words, on average one new species takes hold every 11 months. Since invasive species cause hundreds of millions of dollars of damage to the Ontario economy and are irrevocably altering our ecosystems, the International Joint Commission (IJC) now considers invasive species as the number one threat to the health and biodiversity of the Great Lakes.

Raw wood crates used for shipping goods to the United States from Asia are thought to be the source of the emerald ash borer. First identified in 2002 in Michigan, when hundreds of thousands of ash trees began dying, this insect is now threatening to spread across southwestern Ontario, putting at risk the more than one billion ash trees in the province.

Ocean-going ships travel the Great Lakes, bringing with them potential invaders in their ballast water or in their holds. Ballast water dumped into the Great Lakes has been identified as the source of many invaders, including zebra mussels, fishhook water fleas, and round gobies. Ships with ballast account for only 10 per cent of the ocean-going ships in the Great Lakes, but are responsible for at least one-third of the invasive species. Although the remaining ocean-going ships have very little ballast water, studies have nevertheless found up to 600,000 invertebrate eggs per tonne of sediment in their holds. These "no ballast on board" ships have the potential to become a significant source of invasive species.

The Asian carp, which was imported to the United States from China to control algae and snails on fish farms, escaped into the Mississippi River when Arkansas fish farms flooded in the early 1990s. The Asian carp can weigh 45 kilograms and be over one metre in length. Called a "large aquatic vacuum cleaner" by the IJC, it eats almost half of its weight a day in fish, mussels, zooplankton and vegetation. Extremely prolific, the female Asian carp carries up to one million eggs. Recently the Asian carp has been found in the Chicago Sanitary & Ship Canal, only a few kilometers from Lake Michigan. An electric fish barrier was installed in the Canal in 2002 to prevent the Asian carp and other invasive species from entering Lake Michigan. The IJC is concerned that the Great Lakes could become a "carp pond."

Although invasive species are a significant threat to the economic and ecological health of the Great Lakes Basin, response by government has been slow and piecemeal. (For ministry comments, see page 207.)

Waste Diversion in Ontario

In June 2002, the Ontario government enacted the *Waste Diversion Act (WDA)* to "promote the reduction, reuse and recycling of waste and to provide for the development, implementation and operation of waste diversion programs." The Minister of the Environment stated that the *WDA* "brings Ontario a step closer to meeting its waste reduction goal . . . of 50 per cent." Under the new Act, a regulation is first made designating a waste, and then a waste diversion program can be developed that sets diversion targets and provides sustainable funding. In September 2002, the minister designated Blue Box waste as the target of the first waste diversion program under the new Act.

Waste diversion programs for used oil and used tires were designated in March 2003, to be followed over the next two years by organics, electrical components, batteries, fluorescent lighting tubes, pharmaceuticals, and household hazardous waste such as paint cans.

Background

In 1994, the province passed significant new regulations on waste diversion under the *Environmental Protection Act (EPA)*. Ontario Regulation 101/94 formed the basis for the current Blue Box program, in which municipalities with a population of more than 5,000 are required to collect newsprint; food and beverage containers made from aluminum, steel, polyethylene terephthalate or glass; and wastes such as aluminum foil and fine paper.

Waste Diversion Act, 2002

The *Waste Diversion Act, 2002*, establishes Waste Diversion Ontario (WDO), as a permanent non-government corporation. WDO includes representatives from the Association of Municipalities of Ontario, Corporations Supporting Recycling, Retail Council of Canada, Brewers of Ontario, the Canadian Manufacturers of Chemical Specialties Association, the Canadian Paint and Coatings Association, the Canadian Newspaper Association, the Liquor Control Board of Ontario, and the Recycling Council of Ontario. The LCBO has agreed to contribute $1 million to assist with the initial setup of Waste Diversion Ontario. Each year, the WDO is required to submit a business plan and a report to the Minister of the Environment describing the effectiveness of each waste diversion program.

The *Waste Diversion Act* includes several provisions regarding public notification and involvement. In particular, s.26(4) of the *WDA* requires the ministry to post waste diversion programs on the Environmental Registry for public comment before a final decision is made, in the same way that regulations are posted under other Acts. The *WDA* also requires that annual reports and WDO business plans be made available to the public.

The Blue Box Program Plan

Over the years, municipalities have not been able to fund their Blue Box programs fully through sales of recyclable materials. With the exception of aluminum, municipal costs for recycling Blue Box materials have exceeded revenues. Since municipalities have had to pay for this program through property taxes, MOE designated Blue Box waste first.

Under the *WDA*, companies that have a commercial connection to a designated waste are called "stewards" and are joined together in an industry funding organization (IFO). Each IFO is responsible for developing and operating a waste diversion program and funding it with fees charged to its stewards based on the amount of waste produced from their products. The IFO for Blue Box waste is called Stewardship Ontario and is made up of industry representatives of sectors that introduce packaging and printed paper into the Ontario consumer market.

In early 2003, Stewardship Ontario drafted the Blue Box Program Plan (BBPP). The WDA requires that the BBPP include diversion targets. The program may also include activities to reduce, reuse and recycle the designated waste; research and development related to the management of the designated waste; activities to develop and promote products that result from the program; and educational and public awareness activities. However, the BBPP must not promote burning or landfilling of waste, or application to land.

Under the *WDA*, Stewardship Ontario is accountable for 50 per cent of the net costs associated with Blue Box recyclable materials, and municipalities are accountable for the remaining 50 per cent. Municipalities will continue to use property taxes to fund the full costs of residential waste that is landfilled. The draft BBPP reports that in 2001 approximately 45 per cent of eligible recyclable material was collected by the Blue Box program and the remaining 55 per cent was disposed of by the householder as garbage to be landfilled.

Municipalities will also receive funding from the LCBO — $5 million annually for the years 2003-2006 – to pay for the cost of recycling alcohol beverage glass. The newspaper industry will spend $1.3 million of their total stewardship fees as newspaper advertising to promote the program.

During the Registry comment period on the new Act, some industry representatives were concerned that the new Blue Box Program Plan could actually result in less recycling if companies substituted non-recyclable materials in order to avoid paying stewardship fees. To discourage this practice, O. Reg. 273/2002 under the *WDA* defines as waste any of the following materials or any combination of them: glass, metal, paper, plastic or textiles – even if they are not defined as Blue Box waste by O. Reg. 101/94 under the *EPA*. Switching to a different type of plastic — for example, one not covered by O. Reg. 101/94 and thus not picked up in a municipality's Blue Box program – will not let a company avoid paying stewardship fees based on the amount of waste it produces.

Stewardship Ontario must also establish an Effectiveness and Efficiency Program to fund initiatives that reduce BBPP costs and increase revenue by encouraging industry to develop new markets for recyclables, such as the use of glass as an aggregate (see pages 33-34 on recycling aggregates in road construction).

Public Involvement in the Blue Box Program Plan

Stewardship Ontario has made considerable efforts to ensure that industry stakeholders and municipalities were involved in the preparation of the Blue Box Program Plan through its Web site and workshops. Although the broader public has also had a number of opportunities to participate, the deadlines for the preparation of the BBPP imposed by MOE may have limited the public's ability to become more directly involved. The Recycling Council of Ontario also held six workshops involving the general public; however, details regarding the proposed BBPP were not available for comment during the sessions. Moreover, Waste Diversion Ontario and IFOs such as Stewardship Ontario are not required by the *WDA* to post waste diversion programs on the Environmental Registry. Only after they are submitted to MOE for approval are the waste diversion programs posted by the ministry on the Registry for public review and comment.

In March 2003, MOE posted the Blue Box Program Plan prepared by Stewardship Ontario on the Environmental Registry.

ECO Comment

The *Waste Diversion Act, 2002*, has the potential to reinvigorate waste diversion efforts in Ontario at a time when some municipalities are cutting back on their programs. The Act is the first substantive regulatory change affecting waste diversion since 1994, and is expected to provide the regulatory context for waste diversion initiatives for the foreseeable future. The *WDA* provides direction to industry, municipalities and consumers by clarifying roles and responsibilities, and by providing a management infrastructure to address issues and develop plans and targets. The ECO is encouraged that the government intends to designate all of the wastes identified by the ministry within two years.

However, the government has distanced itself from the often-contentious issue of waste diversion by moving accountability for these programs to Waste Diversion Ontario. The *WDA* also protects the government from lawsuits from the public for actions taken by the WDO. The ECO is concerned the public's right to hold government accountable for waste diversion decisions is thus limited.

On June 20, 2003, MOE prescribed the *WDA, 2002*, under the *EBR* so that all regulations made under the Act would be subject to the notice and comment provisions in s.16 of the *EBR*. The ECO supports this decision, but believes that the *WDA* should also be prescribed for reviews and investigations. Although the minister is required to review the Act every five years, to notify the public of the review, and to publish a report regarding the review, there is no requirement to consider comments from the public as the MOE is required to do by the *EBR*. The ECO believes that the five-year review report should be posted on the Registry as a proposal to give the public the opportunity to comment. Prescribing the Act for review and investigations and prescribing the five-year review report would improve transparency and provide greater opportunity for the public to be involved. In addition, the ECO is concerned that waste diversion programs will not be posted on the Registry until after they are submitted to the minister. As a result, the general public is less likely to be aware of opportunities to participate in decisions about waste diversion programs while they are being developed. It is unclear what effect comments from the public could have at a later stage. The ECO expects to review the minister's decisions on waste diversion programs in our next annual report.

The ECO is encouraged that funds will be available through the Stewardship Ontario's Effectiveness and Efficiency Program to improve municipal recycling systems and to research and develop markets for recyclables. While recycling efforts should result in improved waste diversion rates, the ECO believes that reduction and reuse approaches will also be key to meeting ambitious diversion targets. Complex issues remain to be resolved and considerable work will be required if significant improvements in waste diversion rates are to be achieved. *(For ministry comments, see page 207.)*

The *Safe Drinking Water Act*

Safe drinking water is considered a basic entitlement by most Canadians, and its provision is essential for the protection of human health. The Walkerton water contamination disaster provided a stark reminder of the consequences of neglecting the need for safe water supplies and soundly managed treatment and distribution systems. In December 2002, the Ontario Legislature passed Bill 195, the *Safe Drinking Water Act, 2002 (SDWA)*. This new statute is designed to bring the key legal and policy provisions affecting the treatment and distribution of drinking water under one statutory umbrella. Many provisions of the *SDWA* were proclaimed into force on June 1, 2003, the same day that new regulations under the Act took effect.

After the Walkerton disaster, the Ontario government established a public inquiry, headed by Justice Dennis O'Connor, to examine the factors that contributed to the May 2000 events in Walkerton, and to make recommendations aimed at strengthening provincial oversight of water delivery systems. The Walkerton Inquiry heard evidence from many actors involved with the tragedy, and a wide range of stakeholders provided testimony at public hearings and presented detailed reports on how to improve Ontario's drinking water systems. Immediately after Part One of the Walkerton Inquiry Report (WIR) was released in January 2002, then-Premier Harris stated that the Ontario government was fully committed to implementing all of

Justice O'Connor's recommendations. This commitment was repeated by the former Minister of the Environment numerous times in the 2002/2003 ECO reporting period, and MOE's work on the *SDWA* and related initiatives provide strong evidence that the Ontario government is acting on its commitment. (For the complete ECO review of this Act, see pages 95-110 of the Supplement to this report.)

One of the key recommendations in Part Two of the Walkerton Inquiry Report proposed the development of a source-to-tap drinking water policy, followed by enactment of a safe drinking water Act that embodied the principal elements of that policy. The WIR also stated that MOE should be the lead agency responsible for developing and implementing the policy. According to MOE, the *SDWA* and accompanying changes to MOE's administrative systems, regulations and guidelines will implement 50 of the 93 recommendations made in Part Two of the WIR, and an additional 14 of the recommendations contained in Part One.

The *SDWA* includes the following key components:

- mandatory licensing and accreditation of all laboratories that test drinking water.
- new standards for drinking water treatment, distribution, quality and testing.
- mandatory certification of all operators of drinking-water systems.
- mandatory licences for all municipal owners of drinking water systems.
- an Advisory Council on Drinking Water Quality and Testing Standards to conduct research on water issues.
- a "standard of care" for municipalities, requiring that they act honestly, competently and with integrity to protect residents.
- stronger enforcement and compliance provisions, including creation of a provincial Chief Inspector to oversee inspection policies and training of MOE inspectors.

Several key sections of the *SDWA* did not come into force on June 1, 2003, and will be proclaimed into force over the following months.

Development of the SDWA

Before the enactment of the *SDWA*, there was no comprehensive legislation on safe drinking water in Ontario. Indeed, Ontario's key laws on water were concerned with controlling water pollution rather than protecting drinking water at the consumer's tap. Thus, the *Ontario Water Resources Act (OWRA)*, the primary piece of provincial water legislation, contains water quality provisions designed to allow MOE to protect both surface water and groundwater from pollution caused by discharges and to take remedial and enforcement action. The *OWRA* and its regulations also provide a regime for licensing water taking, water wells, water supply and treatment facilities (now partly superceded by the *SDWA* provisions). Prior to Walkerton, many important

... before the enactment of the SDWA, there was no comprehensive legislation on safe drinking water in Ontario. Indeed, Ontario's key laws on water were concerned with controlling water pollution rather than protecting drinking water at the consumer's tap ...

aspects of water treatment and safety testing were governed by guidelines and policies that were implemented by staff at health units, water treatment plants, local and central MOE offices, and private and public sector labs, and then given legal effect to the extent that they were incorporated into certificates of approval (Cs of A) issued to system owners.

Testimony and written evidence provided to the Walkerton Inquiry demonstrated that, in the lead-up to the Walkerton crisis, MOE's approach to regulating municipal drinking water systems was paternalistic and uneven. MOE often did not issue Orders requiring specific actions by municipalities or operators, even when chronic problems — such as management of the Walkerton water system — appeared to merit firm regulatory intervention. Standards for municipal drinking water systems ranged widely, depending on when infrastructure had been installed and Cs of A and other permits issued under the *OWRA* had been updated. In June 2003, one MOE expert estimated that approximately 1,950 of the 4,500 current water treatment and distribution Class I-IV operators in Ontario had never been required to pass a certification examination, as is normally required by regulations under the OWRA, because these operators had been "grandparented" into their roles. Under the *SDWA*, all operators will have to be certified and many grandparented operators will be required to undertake further training.

At the same time that Bill 195 was tabled, the Ontario government announced the establishment of an Advisory Committee on Watershed-based Source Protection Planning (ACWSPP) to begin work toward developing a watershed-based source protection framework for Ontario. The Ontario government stated that this step was designed to meet Justice O'Connor's recommendations on protecting the source of drinking water. The work of the ACWSPP to develop a comprehensive watershed protection framework will be reviewed in future ECO annual reports.

Public Participation and the EBR Process

In August 2002, MOE provided early public notice on the Registry that it was considering the key components of a *Safe Drinking Water Act*, and sought comments on the proposed components. MOE summarized the key features of the new system in a clearly written technical description attached as a hypertext link to the proposal notice. The components were based on the recommendations and suggestions set out in the WIR.

According to MOE, the initial *SDWA* Registry proposal notice drew a total of 78 comments from laboratory associations and laboratories, health units, water works owners, municipalities, environmental organizations and other stakeholders.

About a month after the close of the first 30-day comment period, the Minister of the Environment tabled Bill 195 for first reading in the Legislative Assembly, and MOE posted a notice for the bill on the Registry with a 30-day comment period.

In response to public comments on the *SDWA* proposal, MOE made a number of important policy changes to Bill 195 that were not part of MOE's original August 2002 proposal. For example, the revised *SDWA* was amended to require that the minister establish an Advisory Council. Situations in which the local medical officer of health should be consulted – such as variances to licences and lab licence suspensions — were also clarified in the revised *SDWA*.

Many groups expressed concern that the August 2002 proposal for the *SDWA* failed to address some of the key recommendations in Part Two of the Walkerton Report for the adoption of a watershed-based planning process, led by MOE and supported or co-led by conservation authorities, and involving local interests. As the first line of defence in the delivery of safe drinking water, source protection plans should be developed for each of the province's watersheds and approved by the ministry. The plans would be binding on all provincial and municipal government decisions directly affecting drinking water safety. Groups like the Ontario Medical Association expressed concern that "the most important action for protecting water at its source" was not part of the August 2002 *SDWA* proposal. These types of comments may have motivated the Ontario government to move ahead more quickly with appointment of the Advisory Committee on Watershed-based Source Protection Planning in November 2002.

Although the *SDWA* addresses many of the recommendations of the WIR, some stakeholders noted that implementing the new law would require a large increase in funding for water treatment systems. Estimates prepared for the WIR in 2002 projected the one-time cost of implementing the Inquiry recommendations at between $99 million and $280 million. The continuing annual cost of implementing the WIR recommendations was estimated at $17 million to $49 million. However, Part Two of the WIR points out that the estimated economic impact of the Walkerton tragedy was over $64.5 million. Justice O'Connor convincingly argued that the reduction in risk that will be achieved by implementing the measures proposed in both reports makes the costs worth bearing.

As a partial response to these concerns about costs, the Ontario government passed Bill 175, the Sustainable *Water and Sewage Systems Act (SWSSA)* in late December 2002, which will require municipalities to recover the full cost of water and sewer services from taxpayers. (For a review of this Act, see pages 105-107.)

Consistent with past ECO guidance that ministries should post two consultation notices for complex and controversial proposals, MOE posted a second Registry notice on October 29, 2002, and provided a 30-day comment period. In addition, the Ontario government agreed to hold public hearings on Bill 195 and Bill 175, the *SWSSA*.

ECO Comment

Without doubt, the *Safe Drinking Water Act* is an important advance and provides a vital new system of regulatory accountability. Finalizing this legislation and developing the accompanying regulations have been important steps for MOE and will hopefully restore public confidence in Ontario's municipal drinking water systems.

When the recent changes described above are viewed together with other MOE initiatives, it seems clear that MOE has begun to establish a strong basis for an overarching policy on drinking water, as called for by Justice O'Connor in the Walkerton Inquiry Report. However, the ECO agrees with stakeholders who contend that the long-term success of the *SDWA* will partly depend on development of a strong new Ontario government policy and law on protecting the sources of drinking water. Thus, it is too soon to evaluate whether the *SWDA* will achieve all the goals set out in the WIR. It is essential that MOE develop a sound, integrated policy on drinking water that addresses concerns about watershed management and source protection.

> *... the Safe Drinking Water Act ... provides a vital new system of regulatory accountability. Finalizing this legislation and developing the accompanying regulations have been important steps for MOE and will hopefully restore public confidence in Ontario's municipal drinking water systems ...*

The ECO commends MOE for undertaking a thorough public consultation process that took into account the comments and recommendations of various stakeholders and members of the public, and resulted in important amendments to the draft legislation. The ECO also commends MOE for posting multiple Registry notices during the development of this important legislation. Since the regulations under this Act will contain crucial implementation details, the ECO is pleased that MOE has proposed to prescribe the *SDWA* under the *EBR* to ensure the public has an opportunity to receive notice and to comment on these regulations. To promote confidence in municipal water distribution and treatment systems, the ECO encourages MOE to consult broadly on regulations and policies related to the *SDWA* and to go beyond the minimum requirements of the *EBR*. The ECO also commends MOE for agreeing to prescribe the *SDWA* under other parts of the *EBR*. This will ensure that implementation of the *SDWA* is subject to the benefits of transparency and accountability conferred under the *EBR*.

On several occasions, the Ontario government has asserted that the *SDWA* is one of the "best" and "toughest" drinking water laws in the world. Indeed, a commitment to passing the "toughest" drinking water legislation was made by the former Minister of the Environment during second reading debate on the *SDWA*. It is difficult to evaluate this claim fully at this time because MOE has not passed some of the key *SDWA* regulations, because the ECO had not yet reviewed any of the new regulations as of June 2003, and because of the unique nature of Ontario's regulatory system. While it is true that Ontario's *SDWA* has many important features, it does not contain the powerful "citizen suit" enforcement provisions found in similar federal legislation in the United States. Moreover, if an alternative public investigation process is established under the *SDWA*, as recommended by Justice O'Connor, it is unclear whether it would contain all of the transparency and accountability benefits inherent in the *EBR* process. The ECO will monitor this issue and the implementation of the *SDWA* and report on progress in future annual reports. *(For ministry comments, see page 207.)*

New Rules for Managing Biomedical Waste

In many Ontario communities, hospitals are highly regarded institutions, respected for their role in providing care and maintaining the health of the community. Their stature is a product of many factors – the commitment of medical staff, community support, longstanding tradition, and the strong financial backing of the province.

However, the waste management practices of some hospitals have been in conflict with this view of hospitals as guardians of community health. As recently as 2001, 45 Ontario hospitals continued to dispose of their biomedical waste (used bandages, syringes, tissues, blood) by burning it in outdated on-site incinerator units. The air emissions from these units typically disperse into the local area. Citizens and environmental organizations (ENGOs) have been expressing concern about these units since at least the late 1980s. (See "Lead-up to the Closure...," below.)

Lead-up to the Closure of Ontario's Hospital Incinerators

1986–1989: ENGOs, MOE identify pollution problems with many hospital incinerators.

1991: An MOE report concludes that only one of the 106 hospital incinerators operating at the time had air pollution control systems.

1992: MOE proposes to close all pre-1986 facilities once replacements are arranged.

1992–1995: Closure strategy shelved due to cost concerns.

1998: ECO annual report notes continuing public concern with biomedical incinerators. The ECO highlights MOE's estimate that none of the 59 hospital incinerators operating in Ontario at the time had air pollution control systems installed.

1998: MOE proposes (RA8E0023) to revise and consolidate eight waste management regulations into one. Initiative includes a plan to create a new biomedical waste definition.

2001: MOE proposes to phase out existing hospital incinerators, and to undertake other hazardous waste initiatives (RA01E0023).

2002: MOE decides not to proceed with any aspect of the 1998 proposal (RA8E0023).

2002: MOE continues with its plan to phase out hospital incinerators and brings forward two waste management guidelines (RA01E0023). No decision made on biomedical waste definition.

The Ministry of the Environment estimates that these units have been disposing of approximately 2,100 tonnes of waste annually — roughly 1,400 tonnes of biomedical waste and 700 tonnes of municipal waste each year. In 2002, the Minister of the Environment pointed out that these incinerators were the fourth largest emitters of mercury and the largest emitters of dioxins in the province. They are also major emitters of particulate matter, heavy metals (e.g., cadmium, lead, mercury), hydrogen chloride and carbon monoxide.

In December 2002, MOE posted a multi-part decision on the Environmental Registry (described below) that included a decision to proceed with Ontario Regulation 323/02, which would require all existing hospital incinerators to cease operation by December 6, 2003. If any hospital chooses to continue to incinerate its biomedical waste, it will have to meet new emission limits, which would require the hospital to install substantially new technology, as opposed to merely upgrading an existing incinerator. With the phasing out of hospital incinerators, biomedical waste will likely be directed to more modern and appropriate facilities. Air quality, particularly in southern Ontario and urban centres where the incinerators are located, stands to benefit from their closure.

Details of Proposal and Decision

The six separate items listed below were included in this multi-part proposal. MOE made decisions to proceed with the first three initiatives:

1) The phase-out of existing hospital incinerators (a regulation to amend Regulation 347, the General Waste Management regulation under the *Environmental Protection Act (EPA)*.

2) Guideline A-1 — Combustion, Air Pollution Control and Monitoring Requirements for Biomedical Waste Incinerators in Ontario.

3) Guideline C-17 — Non-Incineration Technologies for Treatment of Biomedical Waste (Protocols for Microbiological Testing).

MOE decided not to proceed, at the time the decision notice was posted on the Registry, with the following three initiatives:

4) Mandating the destruction of PCBs in storage (a regulation to amend Regulation 362, Waste Mangement-PCBs, under the *EPA*).

5) Implementing a new biomedical waste definition and harmonizing the PCB definition with the federal definition (a regulation to amend Regulations 347 and 362).

6) Guideline C4 - The Management of Biomedical Waste in Ontario (a guideline revision).

Guidelines A-1 and C-17 identify the technology and standards for treatment of biomedical waste that could replace the use of hospital-based incinerators. Guideline A-1 deals with the standards for new incinerator technology, should an organization plan to build a new facility to deal with biomedical waste needing treatment. Guideline C-17 identifies four other technologies — steam sterilization, chemical disinfection, microwave and macrowave technology — and the destruction levels each must meet when treating biomedical waste. (For greater detail on these guidelines, see the Supplement to this annual report, pages 118-128.)

The initiatives MOE did not proceed with at the time of posting the decision notice included mandating the destruction of stored stocks of polychlorinated biphenols (PCBs that were used as an insulator and coolant in electrical equipment) and harmonizing the PCB definition with the federal definition. MOE estimated in December 2002 that there are about 99,000 tonnes of PCB wastes stored at 1,000 sites throughout Ontario. As well, MOE did not finalize Guideline C4 — The Management of Biomedical Waste in Ontario, nor implement a new biomedical waste definition. This regulation and guideline, if finalized, would spell out very precisely what constitutes a biomedical waste and how to handle it. Reaching a decision on the latter initiatives would have been useful in clarifying the relationship between Guidelines C-17 and C-4 as well as Regulation 347.

ECO Comment

One of the most immediate concerns about the handling, treatment and disposal of biomedical waste is the risk posed to the health and safety of those handling the waste or exposed to it. Potential impacts on the natural environment are also important, notably air emissions of dioxins, mercury, cadmium and other contaminants from biomedical waste incinerators. With hospital incinerators scheduled to close by the end of 2003, the environmental impact of biomedical waste management should diminish significantly, i.e., major sources of toxic airborne substances in urban centers should be eliminated.

MOE released the two guidelines to provide updated rules and guidance about waste disposal issues arising from the hospital incinerator phase-out. The disinfection techniques outlined in MOE's Guideline C-17 should provide environmental benefits, and are likely to be the most common disposal approaches to replace incineration.

The ECO suggests that enhanced education, inspection and compliance efforts should accompany the new biomedical waste management system. Education on source separation and pollution prevention would help hospitals to reduce increased disposal costs associated with the implementation of the new regulation and guidelines. Based on the complexity of disinfection processes and treatment techniques identified by commenters on this proposal, enhanced inspection and compliance efforts are needed as well.

MOE should move quickly to incorporate into the remaining initiatives the suggestions arising from these comments, and ensure as well that the initiatives are finalized — for example, the regulation and guideline needed to implement the new biomedical waste definition. This would help to clarify the implementation of Guideline C-17 and prevent any potential conflict or confusion with Regulation 347.

The ECO had numerous concerns with the process MOE used for handling this decision — ranging from how the proposal was structured to the ministry's handling of public comments and its "split decision."

Despite these drawbacks about process, the outcome of this ministry decision is very positive. Ontario's outdated hospital incinerators, which have been significant sources of mercury and dioxin emissions, will have to shut down by the end of 2003. So far it is not clear what portion of this hospital-generated biomedical waste will be treated by the technologies outlined in the new guidelines, and what portion might be exported to other jurisdictions. The ECO will continue to monitor developments in this area, including how MOE treats those components of the proposal that did not proceed. *(For ministry comments, see page 207.)*

Changes to the Air Quality Index

Ontario's Air Quality Index (AQI) provides the public with information about local air quality based on continuous tracking of six key pollutants at 36 sites across the province. One of the six pollutants is particulate matter. In August 2002, the Ministry of the Environment added fine particulate matter ($PM_{2.5}$) to the AQI. This change will more adequately describe poor air quality not previously captured in the Index.

MOE replaced the older suspended particles sub-index, which was described as an outdated and indirect method to represent fine particulate matter, with the new $PM_{2.5}$ sub-index, which is based on direct measurements.

Particulate matter consists of microscopic solid particles and liquid droplets in the air. Fine particulate matter is primarily formed from chemical reactions in the atmosphere and through fuel combustion (e.g., motor vehicles, power generation and industrial facilities). The particles also adsorb and transport other chemical pollutants. Fine particles have a diameter of 2.5 microns and less ($PM_{2.5}$) and are known as respirable particles because they are small enough to penetrate deep into the respiratory system. MOE says that exposure to fine particulate matter is a major health concern, associated with hospital admissions and several serious health effects, including premature death. $PM_{2.5}$ is also one of the main pollutants in smog.

To come up with the AQI, the concentration of each pollutant is measured hourly and is converted into a number using the AQI scale of 0 – 100 plus. The pollutant with the highest number becomes the AQI for that location. The AQI categories are "very good," "good," "moderate," "poor" and "very poor." For the fine particulates sub-index, MOE set the important AQI value of 50, which separates the "moderate" category from the "poor" category, to correspond to the new Canada Wide Standard (CWS) for $PM_{2.5}$.

MOE posts the AQI readings on its Web site and on a telephone recording, and updated readings are reported to the public and news media at set times every day. The ministry uses the AQI and weather forecasts to issue three-day air quality forecasts, smog alerts and smog advisories. MOE also sends electronic email notification of smog alerts to municipalities and others who have requested notification. Public information on $PM_{2.5}$ and its health effects accompany the AQI readings and notifications.

Adding $PM_{2.5}$ to the AQI is expected to result in the ministry's issuing a higher number of poor air quality days and smog alerts in most areas of the province in all months of the year. Previously, MOE usually issued smog alerts on the basis of high levels of ozone, which occur mainly from May to September. But fine particulate matter can build up at any time during the year. For example, on March 17, 2003, most of southern Ontario registered readings of "poor" air quality due to high levels of $PM_{2.5}$.

The ministry says that the purpose of the new sub-index is to provide Ontarians with more information on air quality so they can make informed decisions about protecting their health and about helping to improve the air. An increase in the number of smog alerts — and more information about health risks — may change behaviour. Several municipalities have smog alert response plans that are triggered by AQI advisories. The plans include mechanisms for informing residents of the potential health threat, as well as specific actions that can be taken to reduce the risk, along with actions to reduce emissions. On days when people are informed the AQI is high due to fine particles, they may be more likely to avoid outdoor exercise or driving an automobile.

The ministry received four comments, all in support of the decision, after it was posted on the Environmental Registry. Two commenters urged the ministry to make further changes:

- to develop a formula to calculate AQI values that takes into account the cumulative effect of the total pollutants, rather than simply the single highest pollutant for each hour.
- to discontinue the use of the "good" and "very good" categories of the AQI because they give a false impression that there is no health risk.
- to provide new information on the health effects of each pollutant.
- to adjust the regulatory standards and threshold levels of the pollutants to reflect new knowledge about health effects.

Toronto Public Health (a department within the municipality) published a study in 2000 that determined that each year about 1,000 Toronto residents die prematurely and another 5,500 are admitted to hospital because of air pollution – during times when the AQI described the air quality as "good" or "very good" 95 per cent of the time. They followed up with another study in 2001 that concluded that over 90 per cent of the premature deaths and hospitalizations attributable to air pollution in Toronto occurred when air quality was classified as "good" or "very good" by the AQI. The study concluded that the AQI does not accurately reflect the true health risk posed by pollution in Toronto.

The 2001 Toronto Public Health study identified several reasons why the AQI misrepresented the true health risk:

- The AQI did not at the time include fine particles.
- The AQI thresholds for several pollutants are too low because they are based on out-of-date regulatory standards that do not take health risks into account.
- The AQI number is based on the single highest pollutant and does not consider the cumulative effect of the multiple pollutants.

One of the commenters pointed out that Environment Canada is leading a multi-stakeholder process to improve the federal AQI, intending to have a standardized, health risk-based AQI system across the country by 2004. The process involves Health Canada, the provinces, territories, municipalities, environmental groups and other stakeholders. The new system would recognize that there is no threshold below which smog and particulates have no negative effect on health, and accompanying information would describe the increasing health risk as the AQI number gets bigger. The proposed new national AQI includes categories such as "low," "medium" and "high risk to health" at levels under 50. The commenter commended MOE for taking an important interim step by incorporating fine particles, but urged Ontario to adopt the proposed new federal system by 2004, since it has a greater capacity to monitor air and since Ontario is more polluted than other provinces.

The commenters recommended that MOE update the health effects information that is distributed with the AQI. Previously, the information MOE provided indicated that there were no known health effects from any of the pollutants when the AQI was good or very good. MOE's old descriptions of effects from suspended particles said there were no health effects until the AQI indicated "very poor" air quality. At this point, the information MOE provides on health effects of $PM_{2.5}$ when air quality is very good, good and moderate addresses the commenters' concerns regarding fine particulate matter. MOE says that people with asthma, cardiovascular or lung disease, as well as children and elderly people, are the most sensitive to the effects of fine particulate matter, and may want to exercise caution even when the air quality is in the very good to good range. People with respiratory disease are at some risk when air quality is moderate.

ECO Comment

The proposed new AQI system being developed in the federal process is expected to be based on health risks, and should address many of the concerns raised during the Registry consultation process about the Ontario AQI. In the U.S., a major overhaul in 1999 added $PM_{2.5}$, new categories and health messages, and made the program mandatory across the country.

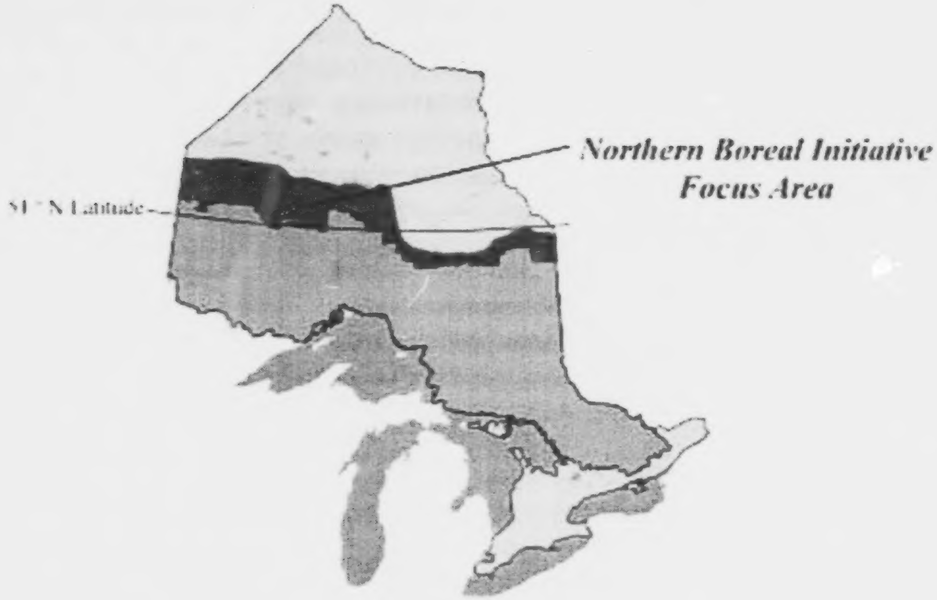
Ontario has taken an important interim step by including $PM_{2.5}$. The ministry has also recognized that there is no safe level of $PM_{2.5}$ below which there are no health effects, and has provided good information on the health risks. The ECO urges MOE to continue to participate in and support the federal process to improve the AQI system further and to alert the public more accurately about the health risks of pollution.

MOE also has another index — the Air Pollution Index (API) — that has the potential to control pollution on days of bad air quality. The API is derived from 24-hour running averages of sulphur dioxide and is based on the old method MOE used to measure suspended particles in the AQI. The ministry has the regulatory authority to order pollution dischargers to curtail their operations when the API in an area reaches 50. MOE should review the API to determine whether to replace the less accurate measure of suspended particles with $PM_{2.5}$. Adding $PM_{2.5}$ to the API would provide the ministry with the regulatory authority to control pollution sources on days when air quality is poor due to fine particulate matter. *(For ministry comments, see page 207.)*

The Northern Boreal Initiative

The Northern Boreal Initiative (NBI) is a program established in 2000 to develop new forestry and other development opportunities in Ontario's far north. This would affect the forests up to 150 km north of the area where commercial forestry is currently authorized. The total potential area may be 6 million hectares. Calling it an essential first step, the Ministry of Natural Resources developed a Community-based Land Use Planning approach for the NBI in 2002.

The boreal forests in the NBI area have global importance, identified by the United Nations Environment Programme as one of the world's remaining significant "closed canopy" forests. These undisturbed forests are dominated by black spruce and jackpine, intermixed with small lakes. Wetlands, ranging from small to very large, are a significant feature of this landscape. The NBI area is also home to 11 First Nation communities, most of them inaccessible by road. The impetus for the NBI came from the interest of First Nations in resource development, as well as the government's commitment to the forest industry to open the lands to commercial forestry.



One of the commitments of the Ontario Forest Accord, signed in 1999 by MNR, the forest industry and a coalition of environmental groups, was to open up these far northern lands to commercial forestry as quickly as possible, subject to the full agreement of affected First Nation communities, approval under the *Environmental Assessment Act (EAA)*, and the creation of parks and protected areas. The Forest Accord was signed at the conclusion of the Ontario's Living Legacy (OLL) planning process that took place to the south of the NBI area, and the commitment to open up these northern lands was in part a trade-off for fibre losses due to the creation of parks in the OLL area.

NBI's Community-based Land Use Planning process is intended to be led by First Nations, with support and input from MNR and other provincial agencies. The resulting Land Use Strategies are expected to set out land use designations and allocations for protected areas, traditional use areas, commercial forestry and tourism. While the catalyst for the NBI planning exercise was forestry, other development opportunities will also be considered in the process, and may result in increased road development, mining exploration and hydro-electric development.

Although planning and decision-making will be carried out at the community level, some subjects, such as protected areas and wildlife, will be considered at much broader landscape scales, such as MNR's ecological regions or watersheds. Unlike the OLL area to the south, there is no broad regional land use strategy to guide community planning, so local planning needs have to be integrated with broader goals and objectives – for example, with targets set by the province for the required number of protected areas.

The first step in each First Nations' planning exercise will be the development of a terms of reference that will set out the details of the planning and consultation for the land use strategy. MNR has committed to providing consultation opportunities at set points during the development of each land use strategy through the Environmental Registry and by other means. The strategies will be approved both by the First Nations through community-determined procedures and by MNR under the *Public Lands Act*.

MNR said that as of November 2002, 11 First Nations communities were already working with NBI. MNR is carrying out the land use planning for the gaps on the land base between areas chosen by the First Nations. The ministry has set up an NBI Protected Areas Working Group, including representatives from MNR, Ontario Parks and environmental groups, to work on developing objectives and criteria for establishing protected areas. MNR has also been working to engage First Nations in this process.

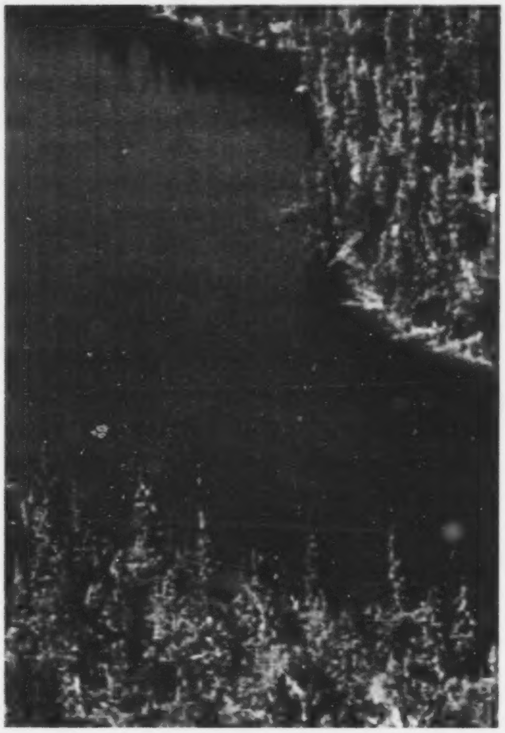
Public Consultation

MNR made very good use of the Environmental Registry for this project, first posting an information notice in 2000 at the very early stages of discussions about the NBI, and then a proposal notice with a long comment period on the Community-based Land Use Process in 2001. The ministry also responded well to requests for additional consultation, hosting a two-day meeting with First Nations at their request and extending the comment period. Comments were received from the Nishnawbe Aski Nation (NAN), which represents 49 individual First Nations in northern Ontario; Keewaytinook Okimakanak, representing six First Nations; one of the First Nations; and two non-governmental organizations.

In its written comments, the Nishnawbe Aski Nation expressed serious concerns and a lack of trust of MNR's motives. NAN suggested that the Northern Boreal Initiative is a thinly veiled attempt by MNR to access resources without properly consulting all NAN First Nations. The NBI is a tool for MNR to use the involvement of a few communities, NAN said, as a justification for broad-scale resource development north of the 50th parallel. NAN stated that the level and quality of consultation cited in the NBI is not in keeping with the Consultation Policy and Procedure that NAN has developed for natural resource consultation. It also expressed concern about First Nations control, costs, revenue sharing and other issues.

The individual First Nations that submitted comments were concerned that the Community-based Land Use Planning process required First Nations to secure funding to carry out activities such as community consultation, planning and data collection, since ". . . the resources available to the First Nations do not accommodate the approach suggested by the Northern Boreal Initiative." MNR's response in its decision notice was to repeat that "the expectation is that First Nations communities will be seeking funding arrangements through a number of agencies; this sourcing of funds will appropriately reflect agency interests and responsibilities."

The provincial government did provide funding, however. Between 2000 and 2002, almost $3 million was disbursed to First Nations involved in the NBI from the Living Legacy Trust. The funds were awarded to the First Nations for Community-based Land Use Planning, biophysical data collection and other related activities. In December 2002, approximately half a million dollars was provided over three years through the Ontario Trillium Foundation to assist NAN in hiring forestry coordinators and developing an approach to land management planning. First Nations continue to seek and receive funding through other sources as well, such as the federal government.



One of the commenting environmental groups felt strongly that community-based land use planning should be applied only after a broad landscape-level plan had been developed that identified all core protected areas and provincially significant features such as wetlands. It stated that such inventories are currently lacking, and that the province should ensure that resources and capacity are available to gather this data before strategic land use planning and development begins. Another group also suggested that, like protected areas, roads and other potential industrial activities should be planned at a larger scale than the community level.

The public will get further opportunity to comment on this initiative during the environmental assessment process, and during comment periods on the Registry associated with each land use planning process.

ECO Comment

Because forestry has not yet been allowed this far north, the Northern Boreal Initiative area contains one of the largest intact forests in the world. The environmental impacts of permitting forestry in the northern boreal forest have not yet been assessed formally, and will require either approval or exemption under the *EAA*. Forestry will require different approaches in the northern boreal than in the south because of the physical environment, harsh climate and short growing season. In the northern boreal forest, trees tend to be slower growing and the forests are less diverse. Site conditions vary from dry to moist, with a larger proportion of moist and wet conditions than further south. Forestry and road development may have significant impacts on the fragile northern boreal forest and upon wide-ranging wildlife species that are sensitive to human disturbance, such as the wolverine and woodland caribou.

The ECO believes that it is imperative that MNR assess the ecological implications of industrial logging in the northern boreal forest and make the research results available to the public. MNR should also keep in mind that the NBI's boundaries are arbitrary, and many watersheds and ecological boundaries straddle them. There is a need to integrate inventories and other ecological data with corresponding units in the areas to the south.

In the Ontario's Living Legacy land use planning process, one of the goals was to protect remnant natural areas that remained after years of forestry, road and other development. For the most part, the NBI area contains fully intact, fully functioning ecosystems. This is an opportunity to protect a large network of parks and protected areas before the area is opened up to resource development. The application of the precautionary principle should be an integral component to this approach. (See also Creating a Biodiversity Framework for Ontario, pages 49-53.) Landscape level planning should inform community-by-community decision-making. It is commendable that the ministry has committed to planning for parks before development occurs. The ECO believes that objectives and targets for protected areas should be developed for the NBI area as a whole. MNR also needs to clarify who is responsible for funding and carrying out protected areas inventories.

First Nations, and particularly the umbrella organization NAN, raised major concerns about the NBI, indicating a mistrust of MNR and its motives. Yet it appears that planning is proceeding in many individual communities, perhaps indicating that the process has provided a reasonable framework. MNR has committed to a community-led process, and to dual endorsement of the land use strategies by both MNR and the First Nations communities. Clearly, transparency will be a key to implementing this initiative.

(For ministry comments, see pages 207-208.)

Recommendation 5

The ECO recommends that the Ministry of Natural Resources conduct gap analyses and develop objectives and targets in order to establish a protected areas network for the Northern Boreal Initiative area as a whole.

Recommendation 6

The Ministry of Natural Resources should carry out a thorough assessment of forest management approaches that are ecologically suited to the northern boreal forest and make the research results available to the public.

The Ecological Land Acquisition Program

Protecting natural areas and wildlife habitats through land acquisition has the potential to be one of the most effective strategies for natural heritage protection in Ontario. In this reporting year the Ministry of Natural Resources finalized its Ecological Land Acquisition Program (ELAP).

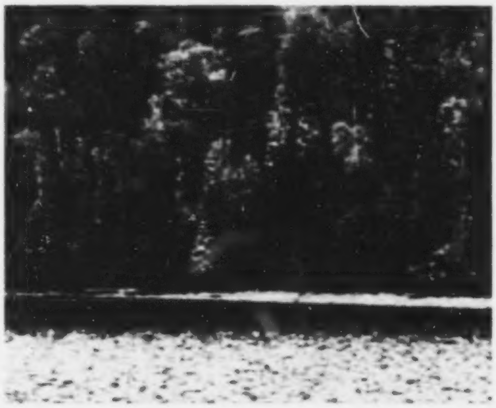
ELAP is now the primary program through which MNR funds the acquisition of natural spaces for conservation purposes in Ontario. (See also A Natural Heritage Strategy for the MNR's Southcentral Region, pages 98-100.) Formerly, MNR operated several programs with varying objectives, the most notable of which was the Natural Areas Protection Program. These programs were combined into ELAP, with a budget of $10 million for a two-year period, 2002/2003 and 2003/2004. MNR describes ELAP as a partnership-oriented program – participants such as Conservation Authorities will be expected to match funding received from MNR through the program, and are usually responsible for any subsequent property management, maintenance and costs.

Although land acquisition is an effective approach to protecting natural heritage, the total value of funding dedicated to this program is small compared to the value of potential sites that exist in Ontario. Many worthy sites exist across the province, both large and small. Those in southern Ontario, where the percentage of protected space is the lowest in the province, are often costliest because of the value of privately held real estate. They are also the most threatened by development. Below are some examples of properties that have been acquired or are the subject of acquisition efforts for conservation purposes:

Property Name	Brief Description, Location	Area	Approximate Value
Marcy's Woods	Carolinian Forest remnant on the shores of Lake Erie. North America's last remaining stand of old growth black maple.	115 ha	$ 2.85 million
Alfred's Bog	Southern Ontario's largest bog and a habitat for rare plants and animals. Located about 70 km east of Ottawa.	1200 ha	$ 2.5 million
Delphi Point annex	Fossil zone / shoreline property on Georgian Bay near Delphi Point and the Georgian Trail.	3.8 ha	$ 0.9 million

These examples show how most of ELAP's current yearly budget (on a pro-rated basis) could be consumed by the acquisition of just a handful of expensive properties. Since ELAP funding is provided on a matching basis, the program can effectively finance approximately $10 million in acquisitions per year. The ability of the program to extend its purchasing power is contingent on the capacity of a nongovernmental organization to raise funds to finance half the purchase value. In some locations this has proved difficult. It should also be noted that the size of most of the sites being acquired in southern Ontario are comparable to or smaller than a family farm and would not compare, for example, to the scale of most provincial parks. This would suggest that greater funding would be required in order for ELAP to create any major new ecological reserves in southern Ontario or amass enough property to connect fragmented ecosystems.

Although the ministry agrees that land acquisition is important, MNR slightly reduced overall annual land acquisition funding by about $0.8-1.1 million (from a high of $6.1 million/year to the current $5 million/year). As a result, natural heritage protection goals in southern Ontario may not be reached — or will take longer to achieve.



ELAP's likely geographic extent and ecological targets are difficult to predict, since the MNR guidelines that govern this program were written in a very flexible, open-ended manner. For example, ELAP's precise geographic coverage, boundaries and priorities are not specified. Under its broad criteria, seemingly any property within an approved plan, strategy or agreement could qualify. To strengthen the program's focus, MNR could look at the gaps in overall biodiversity protection in the province. (See Creating a Biodiversity Framework for Ontario, pages 49-53.) This could help in the acquisition decision-making process when assessing whether to purchase a property outright or to protect it by other means, such as through a conservation easement. The degree of threat to a species or habitat could help determine the degree of protection afforded a property.

The ECO appreciates that MNR amalgamated all of its pre-existing land acquisition programs into a single program, which could reduce administrative overlap and improve program delivery and efficiency. However, accountability and transparency of decision-making could also be reduced, since so far there are fewer clear objectives and criteria in the new program guidelines than in earlier programs. The ECO hopes this is MNR's first step toward developing a stronger long-term Ecological Land Acquisition Program. *(For ministry comments, see page 208.)*

Recommendation 7

The ECO recommends that the Ministry of Natural Resources review whether funding for the Ecological Land Acquisition Program is adequate, given the acquisition opportunities and need for ecosystem protection in Ontario.

A Natural Heritage Strategy for MNR's Southcentral Region

According to the Ministry of Natural Resources, the new Natural Heritage Strategy for the Southcentral Region "provides overall direction to MNR staff with respect to natural heritage activities and their integration into all program areas" that the ministry delivers. It is a means of setting priorities, the ministry states, so that limited resources and capacity can be effectively focused.

MNR's Southcentral Region covers all of Ontario south of the French River. It comprises approximately 12 million hectares, 80 per cent of which is private land. The Strategy recognizes that increased urbanization and the fragmentation of natural landscapes have placed many species and ecosystems at risk. MNR also asserts that the large human population living in the Southcentral Region has also caused significant pressure on natural heritage features and functions because of a variety of recreational pursuits.

The Strategy identifies the components of a vision for the Southcentral Region and proposes a series of actions that define a comprehensive natural heritage program. Steps necessary to identify and establish a natural heritage system and its individual components are outlined in the Strategy. The Strategy recognizes that the completion of a "natural heritage system" would provide a strong foundation for Ontario's Living Legacy (OLL), and is critical to Ontario's system of parks and protected areas.

A natural heritage system will be established, says the ministry, that will consist of "core conservation lands and waters linked by natural corridors and restored connections." Natural heritage systems are identified by the ministry as landscape networks for the conservation of biological diversity, natural functions, and viable populations of indigenous species and ecosystems. MNR's achievement of this vision depends on four interrelated components:

- a clearly defined natural heritage program;
- shared stewardship, communication and education;
- information, research and monitoring;
- training and development.

The ministry describes each of the components and sets out their related goals and strategic actions. In an appendix to the Strategy, these actions are set out in more detail with specific tasks and their relative priority. The appendix does not contain new policies or programs, but is essentially a ministry workplan. MNR anticipates updating the list of priority tasks in the appendix annually. As part of the Strategy, MNR states that it will develop a natural heritage policy and procedures manual to clarify its own roles and responsibilities.

In the Strategy, MNR describes a significant shift in its approach to natural heritage protection and management. One of the changes is a move from a traditional focus on site- and species-specific identification, protection and management, to a landscape-level approach. Another change is from a focus on protected areas to a focus on natural heritage-system planning, including stewardship of private lands and restoration. MNR describes an increasing reliance on "partners," as, over time, the ministry developed and delivered its own programs internally. The ministry now recognizes it shares responsibility for natural heritage issues with stewardship councils, municipalities, non-governmental organizations, and the private sector.

The identification and establishment of parks and protected areas is a central component of its Strategy, says MNR. Although its efforts to date have largely focused on the northern half of the region, as part of the planning area for the Ontario's Living Legacy (OLL) initiative, the ministry asserts that the next step is to focus on the creation of protected areas to the south and east of the Canadian Shield, which was beyond the scope of OLL.

MNR states that it will apply a natural heritage systems approach to landscape planning regardless of the tenure of the land. Land acquisition will be used as a way of protecting natural heritage through such programs as the Ecological Land Acquisition Program (see also pages 96-97). Lands that are not provincial parks or conservation reserves, but are owned and protected by other means, should be recognized as contributing to a protected areas system, according to the ministry, and natural heritage values should be integrated into all aspects of resource planning and management — referring to the significant amount of related municipal planning now taking place. The Strategy states that the Oak Ridges Moraine Conservation Plan serves as an example of the identification of core conservation lands.

MNR identifies the conservation of species at risk within its Southcentral Region as being a key priority of the Strategy, saying that the conservation of the more than 750 species at risk found within the region is central to the ministry's programs. These species include those listed by both the provincial and federal governments as being endangered, threatened, vulnerable and of special concern, as well as those identified by MNR as being extremely rare. Developing and implementing recovery plans for all threatened and endangered species within the region is a high priority, says the ministry. The Strategy also commits staff to participate in the development of a provincial species at risk strategic plan (see Species at Risk, pages 134-138).

The Strategy recognizes that Ontario's planning process is an important mechanism for protecting natural heritage; that the Forest Management Planning process is based on ecological principles that consider natural heritage; and that the Provincial Policy Statement under the *Planning Act* serves a fundamental role in protecting natural heritage on private lands in the Southcentral Region. (See Having Regard to the *Planning Act*, pages 131-133.) The ministry asserts that the Conservation Land Tax Incentive Program and the Managed Forest Tax Incentive Program are also valuable tools in protecting natural heritage.

ECO Comment

The ECO encourages MNR to develop strategies that address significant environmental issues such as natural heritage. (See Creating a Biodiversity Framework, pages 49-53.) However, in the case of the ministry's new Natural Heritage Strategy, the ECO is concerned that MNR has merely presented its existing workplans for the region, characterizing them as a natural heritage strategy. MNR does admit that the Strategy does not create any new policy, but explains that the difference between this Strategy and the ministry's internal operational planning processes is that MNR's Southcentral Region has chosen to consult with stakeholders to help determine priorities.

The Strategy does contain a commendable vision of completing a natural heritage system of core conservation lands and waters linked by natural corridors and restored connections. However, the Strategy does not explain how the ministry would systematically achieve this vision. As an illustration, none of the policies or programs referred to in the Strategy.specifically address how the ministry would create a system of natural corridors and connections to maintain or restore natural heritage in the region.

Many of the operational programs listed by MNR in the Strategy are commendable. However, it does not contain any measurable targets that could provide the basis for reviewing the success of the Strategy, nor does it contain any timeframes for completing its objectives. Instead, MNR states that targets will be set according to district-specific information.

To encourage greater transparency in the implementation of the Strategy, the ECO encourages MNR to provide clearly detailed plans that explain how, where, and when targets will be achieved and by whom. If the Strategy is intended to complement Ontario's Living Legacy, as is suggested by the ministry, planning at a landscape scale should occur and the same level of public input should be sought. The ministry does state that it will produce Ecoregional Direction Statements and State of the Resource reports. The ECO encourages MNR to place information notices covering these reports on the Environmental Registry.

MNR suggests that private and municipal lands should be recognized as contributing to a protected areas system. The ECO agrees that the actions taken by private landowners or municipalities to protect natural heritage should be included. However, this involvement with partners does not relieve MNR of its own responsibility to take a leading role in achieving the overall plan. Privately protected lands should not be viewed as substitutes for areas that are specifically recognized as protected areas through legislation such as the *Provincial Parks Act*. The ECO encourages MNR to identify and regulate protected areas in southern Ontario based on ecological representation and special natural heritage values, such as habitat for species at risk.

(For ministry comments, see page 208.)

The *Electricity Pricing, Conservation and Supply Act, 2002*

In late 2002, the Ministry of Energy introduced Bill 210, the *Electricity Pricing, Conservation and Supply Act, 2002*, which promotes energy conservation and renewable energy and limits the commodity price of electricity for certain consumers – for instance, for households and institutions. Acts amended by Bill 210 include the *Assessment Act*, the *Corporations Tax Act*, the *Electricity Act, 1998*, the *Ontario Energy Board Act, 1998*, and the *Retail Sales Act*. These legislative amendments have changed, or are intended to change:

- the administration of the Independent Electricity Market Operator.
- the energy efficiency objective of the Ontario Energy Board (OEB).
- the cost of electricity for certain consumers through a rate cap and rebate.
- many costs for generators of electricity from renewable or alternative energy sources.

Highlights of Changes to the Electricity Act

Bill 210 amended the *Electricity Act, 1998 (EA)*, in various ways. One of the purposes of the *EA* was amended slightly to include the promotion of "energy conservation" and "alternative and renewable energy sources." Changes were made altering the rule-making and other powers of the Independent Electricity Market Operator, a body that oversees Ontario's wholesale electricity market. Another Bill 210 amendment to the *EA* provided for a 120-month exemption from the gross revenue tax for eligible new hydroelectricity. Also, provincial Cabinet can now make regulations under the *EA* requiring the use of electricity meters or other energy conservation devices.

Highlights of Changes to the Ontario Energy Board Act

Conservation Measures

Bill 210 strengthened the objectives of the Ontario Energy Board in the areas of promoting energy conservation and alternative and renewable energy. It also provided the minister the authority to issue directives promoting energy conservation and alternative and renewable energy. The Board's licencing powers ensure that the conservation principles spelled out in a directive or in the Board's objectives are put into effect in an OEB-regulated industry or organization.

A mechanism to allow "net metering" was created by Bill 210. Net metering allows electricity customers to install their own renewable generation equipment and use the electricity grid for storage. (By avoiding the cost of energy storage equipment, investing in renewable energy is more cost-effective.) Customers receive credit against their bill for whatever electricity they place on Ontario's electricity grid. This incentive could help to encourage even low-volume consumers to install small, benign generators of electricity such as solar panels or wind turbines.

Bill 210 broadened the range of products and services that may be marketed by an electricity distributor's affiliate, from just "energy efficiency" to include energy conservation, load management, and alternative and renewable energy. An electricity distributor's affiliate, for instance, could now market solar panels to consumers, not simply supply electricity or information about methods of becoming more energy efficient (such as brochures about energy savings from low-energy lighting).

Consumer Protection Measures

Bill 210 provides the ministry with a new means to set a fixed rate for the commodity price of electricity for most consumers and to rebate costs above 4.3 cents per kilowatt-hour for the period from May 1 to November 30, 2002, for low volume and designated consumers. Fixed electricity rates went into effect on November 11, 2002, and apply to electricity used on or after December 1, 2002. "Low-volume" consumers (see Definitions, below) who do not request otherwise will pay a fixed rate, 4.3 cents per kilowatt-hour for the commodity price of electricity, until at least May 1, 2006.

Electricity Consumer Definitions

Low-volume consumer means a consumer who annually uses less than 150,000 kilowatt hours of electricity – for instance, owners and occupiers of single family dwellings and many small businesses, as well as those listed in the regulations.

Designated consumer includes classes of consumers who use up to 250,000 kWh of electricity annually and have a demand load of less than 50kW, as well as named institutions (schools, universities). This category is expected to capture most of the small businesses in Ontario.

Other designated consumers will also be covered by the price cap. Certain electricity consumers were reimbursed $75 in 2002 because of Bill 210, in payment for part of the commodity price they paid for electricity between the opening of the market on May 1, 2002, and November 30, 2002. Further payments may be required by regulation (some consumers received more in rebates, which reflected their larger energy consumption while the market was open). Some energy analysts have expressed the opinion that the rate cap will be a major barrier to the development of new lower-impact forms of electricity generation. Another effect of the rate cap could be less energy conservation by consumers.

Other Acts and Regulations

Bill 210 also amended the *Assessment Act*, the *Corporations Tax Act* and the *Retail Sales Act*. The ECO did not review these amendments, since these Acts are administered by the Ministry of Finance, which is not prescribed under the *Environmental Bill of Rights*. However, a brief description of these changes is included in the full review of this Act in the Supplement to this annual report.

Regulations must still be made to bring Bill 210 powers into full effect. For example, Bill 210 identifies at least 32 specific areas in which Cabinet can make regulations under the *Ontario Energy Board Act* alone. The nature of the regulations made under Bill 210 will have a major impact on the effectiveness of the legislation.

As of the close of March 2003, the Ministry of Energy had not posted any regulatory proposals pertaining to Bill 210 on the Environmental Registry. However, many of Bill 210's regulation-making powers were created within legislation that is not subject to the *EBR*, so the proposals for these regulations would not be posted on the Environmental Registry. The regulations already made were under legislation not subject to the *EBR*; they were published in the Ontario Gazette.

The EBR and the Legislative Process

This omnibus legislation was the subject of a speedy authorization process. The legislation was enacted and became law before the standard *EBR* 30-day notice and comment period for the proposal closed. The Ontario government announced its package of changes for the electricity network on November 11, 2002. On November 28, 2002, the Ministry of Energy posted its proposal for 30 days. The bill received Royal Assent on December 9, 2002.

However, the majority of the Acts amended were financial, corporate and administrative in nature, as were many key elements of the legislation. Furthermore, the Ministry of Energy notified the public of the possibility of a shortened comment period in its proposal notice, consistent with ECO guidance in our 2000/2001 annual report about complying with the *EBR*.

Finally, an all-party committee of the Ontario Legislature, the Select Committee on Alternative Fuel Sources, held consultations and reported on measures to advance energy conservation and alternative and renewable energy in advance of this proposal. Some of the measures in Bill 210 are consistent with recommendations from this committee's report.

ECO Comment

The ECO welcomes measures that promote energy conservation, efficiency and the use of renewable energy, and some of the Bill 210 measures could foster advances in these areas. These measures could make positive contributions to air-related environmental programs such as MOE's Anti-Smog Action Plan (reviewed on pages 62-64), greenhouse gas reduction efforts, and acid rain mitigation (see also Creating and Conserving Electricity, on pages 56-61). In our 1998 annual report, the ECO made numerous recommendations to reduce the environmental impact from Ontario's energy sector. Among the recommendations were that the Ministry of Energy should implement programs to encourage the development of renewable energy and report annually on progress to meet targets for energy efficiency and renewable energy.

In many cases, regulations will be required to realize Bill 210's environmental benefits. Accordingly, the ministry should post regulatory proposals arising from Bill 210 on the Environmental Registry as soon as possible in order to give form to many of the bill's new legislative powers. The ECO would also welcome an annual accounting by the ministry of the effectiveness of various Bill 210 conservation incentives and measures.

Finally, it is important to note that Cabinet has retained discretion to reverse many of the Bill 210 measures that re-regulated the electricity market, such as the *Electricity Act* amendments pertaining to the Independent Electricity Market Operator. This was done by including clauses in Bill 210 that can revoke other clauses of the bill when the former are proclaimed, i.e., without requiring new legislation. Thus, a future Ontario government may again attempt to deregulate certain aspects of the electricity sector and allow the price of electricity for all consumers to fluctuate in the market. Further evidence of this likelihood is the fact that the electricity rate cap will expire, unless renewed, in the year 2006. Renewable and alternative sources of electricity, as well conservation, would likely benefit from a fluctuating, but higher average electricity price. ***(For ministry comments, see page 208.)***

Recommendation 8

The ECO recommends that the Ministry of Energy, Management Board Secretariat, and other ministries consult with the public and take full advantage of the Environmental Registry in developing key environmental aspects of current and forthcoming energy conservation initiatives such as the Green Power Standard program and government-wide energy conservation targets.

The *Sustainable Water and Sewage Systems Act*

In December 2002, the Ontario government passed the *Sustainable Water and Sewage Systems Act, 2002 (SWSSA)*, as part of its response to the contaminated water tragedy in Walkerton and to the recommendations made in the Part Two of the Walkerton Inquiry Report. The *SWSSA* requires that municipalities that provide water and sewer services to the public implement full cost accounting and full cost recovery. The Act seeks to introduce the principle that having consumers pay the full cost of providing water and sewer services will promote water conservation and greater awareness of water and environmental protection — and thus help to ensure a healthy aquatic environment and safe drinking water for Ontario residents.

This means that municipalities will have to assess and report on the full cost of providing water and sewer services, including expenditures related to source protection, operating and financing water and sewage systems, and renewal, replacement and improvement of these systems. Municipalities will approve their own reports on the full cost of providing services and then submit them to the Minister of the Environment for approval. Having accounted for these costs, municipalities will then prepare and approve cost recovery plans indicating how they will finance the full cost of providing those services.

The *SWSSA* applies only to municipalities, and even if a municipality has transferred its authority to provide water or sewer services to another entity, such as the Ontario Clean Water Agency, it will be deemed to be providing the services for the purposes of this Act.

The legislation contains few details about implementation of the *SWSSA*; instead, these details will be provided in regulations to be made under the Act. The regulations will establish what sources of revenue may be included in the plan and the maximum amount by which municipalities may increase charges for water or sewer services over any period of time. However, a municipality may seek the minister's approval to increase those charges beyond the maximum amount set out in the regulations.

Public consultation on the *SWSSA* included notice and comment opportunities through the Environmental Registry and public legislative committee hearings held on both the *SWSSA* and the *Safe Drinking Water Act*. (See pages 80-85 for more information on this Act.) Following these hearings, the committee made extensive amendments to the *SWSSA*. They include giving more control over full cost reports and cost recovery plans to the municipalities; adding the cost of source protection as a component in the full cost of providing water and sewer services; and involving municipal auditors and professional engineers in full cost reporting.

At present, water and sewer rates vary according to municipality, but are often heavily subsidized by provincial grant programs, especially in small municipalities. Since municipal water prices in Ontario are generally very low, particularly compared to many European jurisdictions, there is room to raise water rates where consumers are not currently paying for the full cost of safe water. Subsidizing the cost of water and sewage services encourages the overuse of water resources. Full cost accounting, in fact, was one of the Six Guiding Principles for Sustainable Development set out by the Ontario Round Table on Environment and Economy: " . . . to prevent overuse and exploitation, all prices ideally should incorporate environmental, social, and resource depletion costs." It is also important to recover the full cost of providing these services because the cost of necessary upgrades to water and sewage infrastructure in Ontario in coming years will be significant. (See the Environmental Impacts of Sewage Treatment Plant Effluents, pages 29-49.)

The *SWSSA* should have a positive impact on water and sewer services and water protection in Ontario. Once it is fully implemented, municipal water and sewer systems should start to become self-financing and sustainable, with adequate funds to finance necessary upgrades to water and sewage systems. However, implementation of the *SWSSA* is likely to require a fairly long period of time.

The transition to higher water and sewage rates should be eased by the fact that the province will have the authority to cap rates and will approve requests by municipalities to exceed that cap only in special circumstances. MOE has indicated that this should protect consumers against sudden or unreasonable rate increases. However, full cost pricing may cause financial hardship for smaller municipal systems and for low-income individuals and families in the province.

ECO Comment

The *SWSSA* is a welcome initiative from the Ontario government in response to public concerns about the safe and sustainable provision of water. The Act puts in place a legal framework to support a comprehensive system of full cost accounting and cost recovery planning that, in the long run, should encourage greater water conservation and protection in Ontario.

The ECO commends MOE for undertaking a thorough public consultation process that took into account the comments and recommendations of various stakeholders and members of the public – and that resulted as well in amendments to the draft legislation.

In particular, the ECO is pleased that the *SWSSA* was amended to allow MOE to require that municipalities providing water and sewer services take into account source protection costs and considerations. This emphasizes the connection between watershed management and water and sewer services, and should help some municipalities plan for and finance source protection as part of providing these services. However, small municipalities and municipalities that obtain their water from a source that has already been affected by a range of other municipal and industrial users may continue to face challenges in source protection. While the recognition of source protection costs in the *SWSSA* is a good first step, the implementation of watershed planning is also required. It is a positive step that the Ontario government established a Source Protection Advisory Committee on November 15, 2002, to develop a provincial framework for watershed-based source protection planning. This committee released its recommendations for public consultation on April 21, 2003, and the government stated that it planned to introduce legislation on source protection planning in fall 2003.

Given that a great deal of detail has been left to regulations under this Act, the ECO is pleased that MOE has prescribed the *SWSSA* under the *Environmental Bill of Rights* to ensure the public has an opportunity to receive notice and to comment on these regulations. To restore confidence in municipal water and sewage systems, the ECO encourages MOE to consult broadly on these regulations. *(For ministry comments, see page 208.)*

Water Management Planning Guidelines for Waterpower

Introduction

Waterpower is a major source of electricity in Ontario. Today about 27 per cent of the province's energy needs are met by water power. Nuclear power accounts for 39 per cent, fossil fuels for 32 per cent, and other sources – for example, wind and solar – for 2 per cent. There are about 200 waterpower facilities in Ontario, two-thirds of which are located south of the French and Mattawa Rivers.

With the enactment of the *Energy Competition Act* in 1998, the stage was set for the deregulation and the opening of a competitive electricity market in Ontario. Prior to this Act, the Ontario government relied upon Ontario Hydro, a Crown corporation, to oversee the operation of its waterpower facilities. The potential privatization of existing hydroelectric generating facilities and the future development of new waterpower facilities by the private sector have created a need for a new policy framework and regulatory changes to ensure that operators meet clear accountability objectives.

In November 1999, a Waterpower Industry Task Force, jointly chaired by the Ministry of Natural Resources and representatives from the waterpower industry, developed a set of policy and program recommendations to support a Waterpower "New Business Relationship" for consideration by the Minister of Natural Resources. Included in their report were recommendations on water management planning, waterpower site allocation and development, waterpower lease agreements, and dam safety. In 2002, acting on the Task Force recommendations, MNR implemented a program to require waterpower producers to develop Water Management Plans (WMPs) to ensure they address environmental, social and economic concerns in a balanced way. The plans are to be produced according to a comprehensive set of Water Management Planning Guidelines (WMPGs), which are the subject of the following ECO review.

What does a WMP Include?

Issues related to water uses upstream from hydroelectric installations are generally focused on the operation of reservoirs and how water level fluctuations affect the aquatic ecosystem, shoreline erosion and recreational activities. Downstream issues generally relate to ensuring there are adequate minimum flows for sustaining the aquatic ecosystem and recreational activities. The process of developing a WMP is intended to provide all interested and affected parties with meaningful opportunities to identify the problems associated with these issues. The WMP process provides a mechanism for identifying values, objectives and constraints, along with a range of optional management strategies. An approved WMP is a document of legal effect governing water levels and flows for the entire river system and requiring dam owners to operate within the parameters set out in the approved plan.

Who is Responsible?

The *Lakes and Rivers Improvement Act*, amended in December 2000 and again in June 2002, gives the Minister of Natural Resources the express authority to order dam owners to prepare management plans in accordance with guidelines approved by the minister. (See pages 128-131 for more information on this Act.) Responding to comments on Registry postings, MNR has made it clear that all facilities under exclusive jurisdiction of the province — including both existing and new hydroelectric power dams — are potentially subject to this Order. A water management plan will still have to be prepared for hydroelectric projects that have been planned, or will be planned, under the *Environmental Assessment Act*.

Producers of waterpower are responsible for developing water management plans that take into account how various operating regimes may affect values within the river system. If more than one power producer operates within a watershed, MNR may require that plans be prepared jointly or under the jurisdiction of a Conservation Authority.

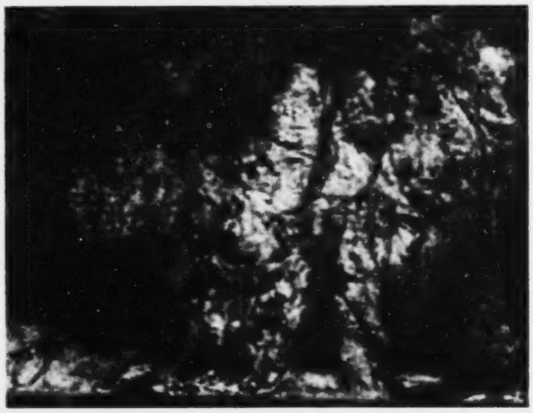
What Do the Guidelines Include?

MNR states that Water Management Plans will be developed based on the following principles:

- Maximum net benefit to society – maximize the net benefits from how water levels and flows are managed, including benefits to river users and riparian owners, as well as to power producers.
- Riverine ecosystem sustainability – arrest any ongoing degradation of the riverine ecosystem resulting from the manipulation of water levels and flows, and seek to improve the ecosystem.
- Planning based on best available information.
- Adaptive management – continually improve resource management, reduce areas of uncertainty, build on successes and make adjustments to limit failures.
- Thorough assessment of options.
- Timely implementation of study findings.
- Aboriginal and treaty rights – WMPs to be undertaken without prejudice to these rights.
- Public participation – open and transparent process.

Target timeframes for preparing WMPs depend on the complexity of the watershed involved. For simple systems involving one waterpower producer, the WMP preparation should take six months or less; for complex WMPs with two or more producers or dam operators, the timeframe is set at 18 to 24 months, with the following suggested time frames for the various sub-phases:

- Planning organization and commencement: 3-4 months
- Scoping (including data collection): 6-8 months
- Option development, evaluation and selection: 4-6 months
- Draft plan development and consultation: 3-4 months
- Final plan development and submission: 2 months



The draft WMP is reviewed by MNR and Fisheries and Oceans Canada over a two-month timeframe. Once the plan is accepted and implemented, the owners of the waterpower facilities will carry out effectiveness monitoring under a compliance self-monitoring and reporting protocol. MNR will be responsible for conducting compliance and enforcement programs. A complete plan review is required at the end of a 5-10 year period; however, if new information comes to light, a mechanism for amending the WMP is described in the guidelines.

A mechanism for dispute identification and resolution, involving the waterpower producer, the Public Advisory Committee and the MNR District office, is included in WMPs should an issue be raised by a concerned person during the preparation of a water management plan. Difficult unresolved issues could lead to Alternative Dispute Resolution and, ultimately, a decision by the Minister of Natural Resources.

Appendices

Fourteen draft Appendices accompany the main set of guidelines to provide extra guidance to plan developers, and many of the comments in response to the Registry posting for the WMPGs were directly concerned with these Appendices. MNR has said that the ministry will address these comments separately for each Appendix. However, the first of the appendices to be completed, Appendix G - Aquatic Ecosystem Guidelines, was posted on the Environmental Registry in October 2002 as an Information Notice, rather than as a regular policy proposal notice, which is subject to all the transparency and accountability features of the *EBR*. MNR should post these Appendices as regular notices on the Registry to allow adequate public comment on these supporting components of the WMPGs.

ECO Comment

Last summer, only months after the sale of former OPG hydroelectric dams on the Mississagi River system to a public company, flat-out operation of the facilities by an operating subsidiary led to a complete draining of Rocky Island Lake. This incident was caused in part by record electricity demands in southern Ontario during a very hot summer. The issue is the subject of both an *EBR* review and an investigation (for details see *Lakes and Rivers Improvement Act*, pages 128-131), and it underscores the urgent need for water management plans proposed by this initiative. However, the timeframe set for the development of WMPs is challenging, and the ECO is concerned that sufficient time may not be available for collecting appropriate hydrometric, socio-economic, aquatic ecosystem and other data.

The ECO is also concerned that the guidelines appear to take the position that where hydroelectric dams exist, the aquatic ecosystem's characteristic "baseline" is that which currently exists in the area. Opportunities to "turn back the clock" on lost ecosystem features may not be possible if plans are rigidly constrained to a *status quo* operating situation.

It is clear that MNR also does not intend that water management planning should threaten the economic viability of the waterpower facilities. The ministry states that "... notwithstanding circumstances in which to generate the maximum net benefits, waterpower facilities would be required to forego a portion of their revenues, it is not the intent of water management planning to render any existing waterpower facility uneconomic." In practice, achieving this balance between the environment and profits may be challenging. While the ECO believes that requiring changes to operating plans cannot ignore profit goals, the development of water management strategies should set a high priority on conservation of natural resource values. For new hydropower projects where no pre-existing financial performance baseline has been established, it is appropriate that WMPs should be developed so as to optimize the overall value of economic, social and environmental benefits to society, rather than maximizing hydroelectric potential as a first priority.

MNR anticipates that the development of WMPs will progress rapidly, and the ministry has advised the ECO that in the next few years, between 80 and 100 Registry notices on WMPs can be expected. Although MNR proposes that information notices be placed on the Registry at various WMP stages, the *EBR* does not require a minister or ministry staff to consider comments on information notices, nor do they allow the public to make full use of public participation rights in the *EBR*. Therefore, the ECO encourages MNR to amend O. Reg. 681/94 under the *Environmental Bill of Rights* in order to classify water management plans as instruments. (See Instruments, pages 9-13.) Instrument proposals for each WMP could then be posted at the initiation of the planning process for each river system, keeping the public abreast of a rapidly developing process. This would also ensure that the public has the right to apply for an investigation or a review of the WMP, or the right to sue to protect a public resource. MNR has said that it will give serious consideration to this suggestion.

The ECO commends MNR for developing these detailed and comprehensive guidelines, and for the extensive consultation with stakeholders and the broader public in their synthesis. Water management planning for Ontario's waterpower industry represents a positive step forward in water management in Ontario. This process, backed up by the changes to the *Lakes and Rivers Improvement Act*, should prevent extreme drawdown situations in the future, such as resulted in the fish kills at Rocky Island Lake.

As provincial emphasis shifts more toward renewable energy sources, more hydroelectric development can be expected, particularly on northern rivers. The ECO is concerned that the province continue to protect some rivers in their natural, unexploited state. While the Water Management Planning Guidelines and underlying regulations are important tools to use where hydropower is developed, the need for overall provincial stewardship of natural river resources should not be overlooked in favour of energy value for the near term. *(For ministry comments, see page 208.)*

Managing Cormorants

In February 2002, the Ministry of Natural Resources posted a proposal on the Environmental Registry describing two ministry programs for researching, monitoring and managing double-crested cormorants. An over-abundance of cormorants is thought by some to deplete local fish stocks, degrade water quality and odour, spread disease and parasites, and pose risks to other wildlife and rare habitats. The two MNR programs were: Year 3 of the Double-Crested Cormorant Research and Monitoring Program, and the Management Strategy for Double-Crested Cormorants for Presqu'ile Provincial Park.

During the 45-day comment period on the proposal, MNR received 1,597 responses, of which 1,505 were form letters and one a petition with 59 names. Over 96 per cent of the commenters indicated they wanted more aggressive action. The Ontario Federation of Anglers and Hunters contend that cormorant populations are now "166 times greater than their historic peak," showing that the "ecosystem . . . is dramatically out of balance." The Federation urged MNR "to begin lethal controls immediately in areas where there are obvious impacts." Other commenters, however, indicated that they wanted limited control or no control at all. There was general agreement that MNR's research pogram would not result in convincing results, since factors such as habitat changes and water quality are not being studied.

In April 2002, the ministry posted its decision to proceed with both programs, with changes to the Presqu'ile Management Strategy in response to comments from the public.

Background

Cormorants are a native species of large waterbirds that inhabit the Great Lakes and large inland lakes in Ontario. Their diet varies regionally based on the availability of prey fish such as alewife, rainbow smelt, yellow perch, white suckers, walleye and pumpkinseed. Cormorants nest in colonies on the ground – or in trees that eventually die because of broken branches and foliage loss, or because of the large amounts of guano (droppings) left at their base. Some scientists believe that cormorant populations, if uncontrolled, will continue to grow until they outstrip their food supply or their habitat, or until they succumb to disease and predation.

Historical evidence indicates that cormorants spread into the Great Lakes area in the early 1900s. Population levels rose until the 1950s and then declined precipitously over the next 20 years, mostly due to the toxic effects of PCBs and DDT. Then, between 1973 and 1991, because of the reduction in these toxic chemicals in the Great Lakes, the explosive growth in their food supply, and their designation as a protected species, cormorant populations grew 300-fold in the Great Lakes region. Concerns regarding their impact on sport and commercial fish populations also began to grow.

In May 1997, MNR posted a "Draft Report – Review of the Population Status and Management of Double-Crested Cormorants in Ontario" on the Environmental Registry. The report stated that concerns about the negative impacts of cormorants appeared to be unfounded since cormorants feed primarily on small non-sport and non-commercial fish. However, the report added, the birds could have significant negative impacts on sensitive habitats and on sport fish populations in localized areas such as small bays on the Great Lakes. In its decision notice, posted November 1998, MNR decided that "control of cormorant numbers should only be considered in specific local areas if the birds are found to be having significant negative, ecological impacts on specific habitats or other species." Nevertheless, municipalities, sport and commercial fishing communities, and the general public continued to be concerned that cormorants were having a negative impact on habitat and fish populations.

Year 3: The Double-Crested Cormorant Research and Monitoring Program

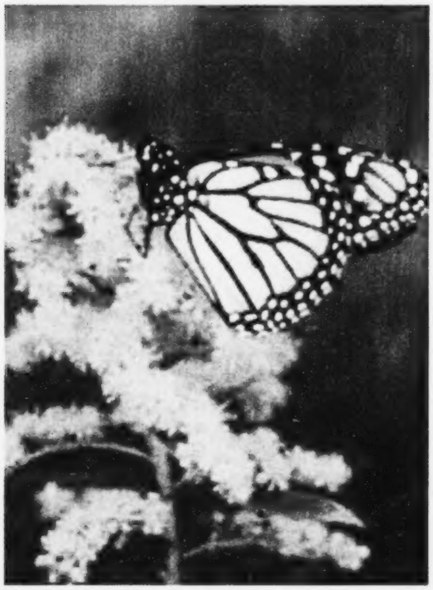
In response to these concerns, in May 2000 MNR began its five-year Double-Crested Cormorant Research and Monitoring Program, with the objective of determining the effects of cormorants on resources such as fish populations and habitat. Year 1 focused on the effect of cormorants on vegetation and the collection of baseline information on local fish populations. During Year 2, fish communities were evaluated, cormorant nests counted, and cormorant foraging activity surveyed by air.

In spring 2002 (Year 3 of the program), MNR oiled virtually all cormorant eggs at three study areas in the North Channel/Georgian Bay area to prevent the eggs from hatching. Oiling involves coating the eggs with vegetable or mineral oil, both of which are non-toxic, edible and biodegradable. The three study areas represent 8 to 11 per cent of Ontario's cormorant nesting population.

According to MNR, if the reduction in the number of cormorants "leads to a significant increase in fish biomass in the treated areas, then it can be concluded that cormorants are significantly depressing fish stocks." MNR plans to continue oiling and collecting data in these areas in 2003 and 2004, and will expand the program within the North Channel/Georgian Bay area. Although results from egg-oiling may not be apparent for two to three years, in the interim the ministry plans to create a Web site where the public can obtain general information about cormorants and the program. Since the research program is limited both in geographic range and the percentage of the cormorant population under study, it is unlikely to resolve complaints regarding damage caused by cormorants.

Management Strategy for Double-Crested Cormorants at Presqu' ile Provincial Park

Presqu'ile Provincial Park is located just south of the Town of Brighton on a peninsula that juts into Lake Ontario and includes Gull and High Bluff Islands. The park area, popular with birders and fishers for years, is renowned as a stopover for migrating waterbirds and monarch butterflies and for its extensive dune ecosystem. The park's population of cormorants has increased from one nest in 1982 to 10,321 in 2001. About 3,050 of the nests are located in the western woodland of High Bluff Island. Concerns have been expressed regarding the impact of the cormorants on the local ecosystem and on the economy of the area.

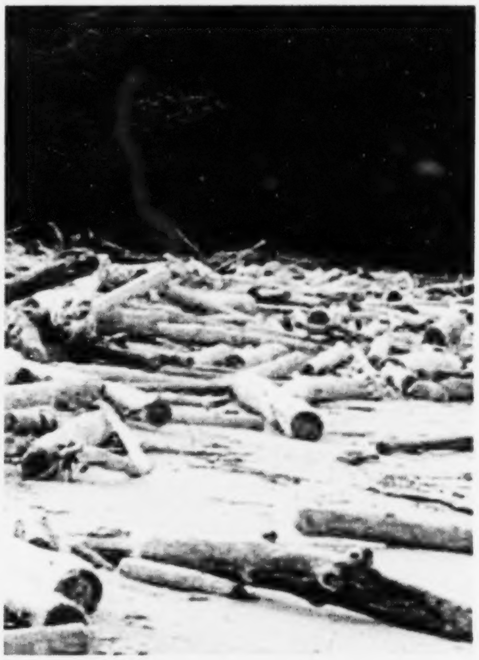


The Presqu'ile Management Strategy was developed after Ontario Parks concluded that the High Bluff western woodland was in "serious decline" due to cormorant activity. The western woodland is considered "significant due to the age of the trees, the uncommon species association and the rarity of mature forest on islands in Lake Ontario." Baseline data on woodland health, such as tree diameter, percentage of leaf loss and crown dieback, were collected in 2000 and again in 2002. MNR intends to reduce the cormorant populations on High Bluff Island over the four years 2003-2006. An annual review and evaluation will be prepared and woodland health will be reassessed in 2006.

Commenting on the Presqu'ile Management Strategy, the Municipality of Brighton asked for immediate and aggressive action and noted that the area has suffered a "serious economic effect ... due to reduction in commercial and sport fishing in the area, as well as the potential for environmental damage to High Bluff Island and the beach area of Presqu'ile Provincial Park."

The Presqu'ile Management Strategy proposes to reduce cormorant numbers by destroying cormorant nests in trees by knocking them down or by spraying with water under high pressure; by harassing adult cormorants to prevent their return via noise-makers, "scare-crow" and optical devices; and oiling eggs in ground nests to prevent hatching. MNR has indicated that control techniques will be changed or stopped if other bird species are being disturbed or if trees are being damaged beyond recovery.

The Strategy states that reducing cormorant numbers on High Bluff Island will result in healthier forest cover for other tree-nesting species, such as the great heron, black-crowned night-heron, great egret, and Caspian tern. It will also reduce nutrient (from guano) run-off and erosion, as well as reduce foraging pressure on local fish populations. Reducing cormorant numbers, according to the Strategy, will also protect the aesthetic value of the island.



However, there is a possibility that reduction techniques will cause some cormorants to move to neighbouring areas, thereby exacerbating the concern regarding fish population depletion in the Brighton area.

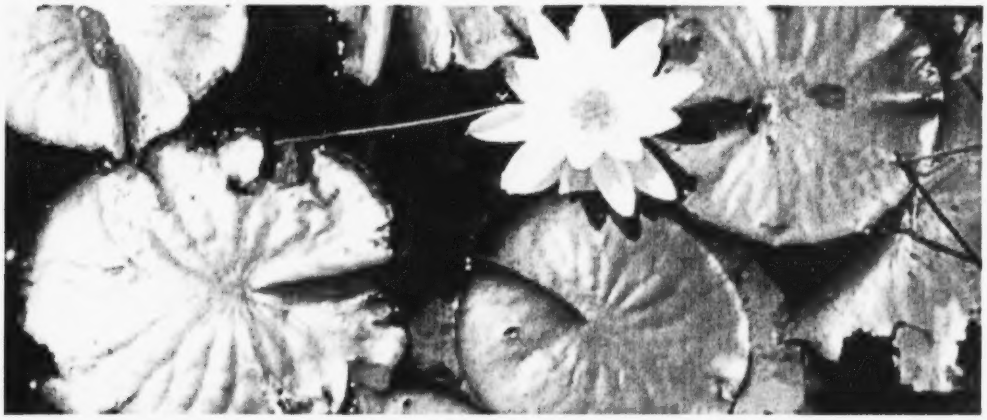
MNR says that part of its Presqu'ile Management Strategy is to provide information regarding the effectiveness of reduction techniques, and whether or not these techniques can be used without undue disturbance to other species in the area or damage to the habitat. The ministry will also provide information regarding the rate at which the woodland recovers, based on a comparison of forest health in 2006 versus 2000 and 2002.

ECO Comment

Management of the cormorant populations is a complicated issue, with environmental, social and economic considerations that could have an effect on the sustainable development of Ontario's natural resources. Ecosystems develop and change over time, and not always in a manner that everyone prefers. Today cormorants are moving into areas of Ontario that they haven't inhabited within our memory. To some people, cormorants are welcome; as high-level predators, they are a sign of a healthy ecosystem capable of supporting a diverse range of species. To other people, cormorants are competitors; they consume sport and commercial fish impacting people's livelihoods and lifestyles. Still others feel that cormorants destroy natural areas that are becoming increasingly rare in southern Ontario; they kill trees and surrounding vegetation, and crowd out other birds. Balancing these diverse views often means making compromises, sometimes in favour of protecting rare habitats, other times protecting sport and commercial fisheries, and sometimes allowing ecosystems to develop and change with minimal human intervention.

The ECO believes that MNR's proposal to conduct further research into potential impacts of cormorants, as well as the effectiveness of cormorant control measures such as egg-oiling, is prudent, consistent with the precautionary principle, and based on sound science. The ECO also agrees that rare habitats such as that found at High Bluff Island should be protected.

The ECO believes 45 days was an adequate comment period on MNR's proposal, partly because the ministry had done previous consultation in 1997. However, the ECO is concerned that the ministry did not adequately explain why no changes were made to the research and monitoring program, despite receiving 1,219 comments requesting changes. Although many concerns were impossible to reconcile, groups both for and against controls argued that the program could not conclusively prove that cormorants deplete local sport and commercial fish populations. Neither the proposal nor the decision notice provided any information regarding what data would be collected and how the data would be used to prove the hypothesis. The ECO believes that this information would have been helpful to the public and encourages MNR to put the information on the proposed cormorant Web site.



In its final decision on the Presqu'ile Management Strategy, MNR described how the public's comments were handled. The ministry indicated that the effectiveness of various harassment techniques to control cormorants were investigated in 2000, but did not provide the results to the public. For transparency, the ECO encourages MNR to provide the public with the research results on the proposed Web site, as well as the annual evaluation of the Presqu'ile Management Strategy.

Whether or not the management of cormorant populations becomes an ongoing activity for MNR will depend on the value that Ontarians place on cormorants. As cormorant populations move into new areas, the ECO expects that MNR will continue to be under pressure to balance the concerns of those who want aggressive reductions in cormorant populations and those who don't. The results from these two programs should provide MNR with additional scientific data on which to base its decisions.

Part 5:

Reviews and Investigations

Members of the public can use the application process provided by the *Environmental Bill of Rights* to urge ministry action they believe is needed to protect the environment. Under the *EBR*, Ontario residents can ask government ministries to review an existing policy, law, regulation or instrument (such as a certificate of approval or permit) if they feel that the environment is not being protected. Residents can also request ministries to review the need for a new law, regulation or policy. Such requests are called applications for review.

Ontario residents can also ask ministries to investigate alleged contraventions of environmental laws, regulations and instruments. These are called applications for investigation.

The ECO's Role in Applications

Applications for review or investigation are first submitted to the Environmental Commissioner of Ontario, where they are reviewed for completeness. Once ECO staff have decided that a particular application meets the requirements of the *EBR*, the ECO forwards it to the appropriate ministry or ministries. The ministries then decide whether they will conduct the requested review or investigation or whether they will deny it. The ECO reviews and reports on the handling and disposition of applications by ministries.

Five ministries are required to respond to both applications for review and applications for investigation. They are:

- Environment
- Energy
- Natural Resources
- Northern Development and Mines
- Consumer and Business Services (Technical Standards and Safety Authority)

Two ministries are required to respond to applications for review only:

- Agriculture and Food
- Municipal Affairs and Housing

In the 2002/2003 reporting year, the ECO received 20 applications for review and 31 applications for investigation. The number of applications for review and investigation increased by one-third over last year, while the number of applications for investigation increased four-fold. Individual applications for review and investigation may be sent by the ECO to more than one ministry if the subject matter is relevant to multiple ministries, or if the applicants allege that Acts, regulations or instruments administered by multiple ministries have been contravened.

The following tables provide a breakdown of the disposition of applications handled by the ministries during the year.

Reviews

Ministry	Reviews Denied	Reviews Completed	Reviews in Progress as of March 31, 2003
MOE	5	2	4
MNR	5	–	–
MAH	1	–	–
OMAF	1	–	–

Investigations

Ministry	Investigations Denied	Investigations Completed	Investigations in Progress as of March 31, 2003
MOE	9	9	5
MNR	4	1	

The majority of applications for review and investigation were denied. In many cases, the ECO did not accept the ministries' rationales for denying these applications. Detailed ECO reviews of the Applications for Review will be found in Section 5 of the Supplement to this annual report, and Applications for Investigation in Section 6.

Investigations: Is MOE using the tools available to the ministry?

In the past 32 years, successive Ontario governments have provided MOE with a wide range of tools and powers — such as the regulatory authority to prosecute polluters, to issue clean-up Orders and to impose administrative monetary penalties to encourage and enforce compliance with environmental legislation. During the 2002/2003 reporting period, the ECO has observed several instances in which MOE responses to *EBR* applications for investigations have been less than adequate and the environment has not been appropriately protected. This suggests that MOE may not be using its full range of tools and powers when the ministry responds to an application for investigation. As a result, applicants may be unaware of the other options available to the ministry to remedy the problems they had set out in their applications.

The following three examples illustrate these observations by the ECO:

- Property owners are required by O. Reg. 903 under the *Ontario Water Resources Act* to locate and properly decommission all abandoned wells on their properties. In 2002, MOE received an application for investigation regarding an abandoned well that the applicants believed had been inappropriately decommissioned. MOE confirmed the allegation but advised the applicants that no charges could be laid because it had been more than two years since the offence was committed. However, s.94(1)(b) of the *Ontario Water Resources Act* states that the statute of limitations does not commence until after the day on which evidence of the offence first came to the attention of the MOE. Since MOE initially visited the site soon after it was notified by the applicants, MOE's interpretation of s.94 was incorrect. MOE also justified its actions by indicating that the well owner had voluntarily agreed to decommission the well, and the ministry chose not to issue an Order requiring the well to be properly decommissioned. (Additional information regarding this application for investigation can be found in the Supplement to this annual report, pages 285-287.)
- Clean Harbors Inc. (formerly Safety-Kleen), which incinerates hazardous waste, was the subject of an application for investigation after an uncontrolled release of vapours from a tank resulted in employees' seeking medical help – a potential contravention of s.14(1) of the *Environmental Protection Act*. MOE advised the applicants that there was no evidence of any off-site impacts since no complaints from the general public had been received. However, s.14(1) does not require that there be any off-site impact. An adverse effect to people's health is a clear violation. Furthermore, MOE did not investigate if the uncontrolled release of vapours met the definition of a spill, although there is evidence to suggest that it did. A spill would have required that the municipality be notified. Since the

municipality was not notified by the company, there was potentially a second offence to investigate. (Additional information regarding this application for investigation can be found on pages 159-163 of this report and in the Supplement to the report, pages 246-249.)

- Combined sewers, which are sewers that carry both raw sewage and stormwater, are common features in Ontario municipalities. During rainstorms and snow melts, combined sewers discharge raw sewage into watercourses despite provincial and federal legislation prohibiting actions that degrade water. MOE has rarely taken action against municipalities to stop these combined sewer overflows. In its response to an application for investigation regarding combined sewer overflows at Ashbridges Bay, MOE acknowledged the applicants' concerns regarding ongoing water quality problems there, but chose not to collect evidence or pursue charges. According to the applicants, the city has continued to approve development that increases the potential for raw sewage to enter Lake Ontario. MOE could have issued an Order and set timelines requiring the Municipality of Toronto to control, reduce or stop these discharges. Instead, MOE is relying on plans from the city to improve effluent quality gradually over the next 25 years. (Additional information regarding an investigation into combined sewer overflows can be found on pages 155-158.)

The examples above suggest that MOE is not using – and may not be aware of – the full range of tools and powers available to it. During the next reporting period, the ECO plans to monitor MOE's handling of applications for investigation and to report our findings in the 2003/2004 annual report. *(For ministry comments, see page 209.)*

Noise Discharge from Cook's Mill

In 2000, the ECO received an application requesting an investigation of alleged noise contamination in contravention of the *Environmental Protection Act (EPA)*. The applicants live immediately adjacent to Cook's Mill in the village of Hensall, in Huron County. The mill has the capacity to receive 80 million tonnes (Mt) per hour of beans, corn, wheat and barley and to dry 30 Mt per hour. The drying process requires the use of drying and aeration fans, which are a source of considerable noise emissions.

The applicants' family moved in to renovate the house near the mill in 1970 after the mother of one of the applicants purchased it. At that time the area was residential. The mill had an office and silos to the west of the house, but the operations were far enough away to cause no adverse impact. Around 1971, Cook's built six more silos and a number of buildings, including a dumping station, dryer, dryer fans and aerating fans about 45 feet from the applicants' property. Cook's also built a driveway next to the applicants' home, which was used by trucks to access the mill. In 1973, having finished the renovation, the applicants moved to another residence across town.

In 1984, after the death of the applicant's mother, they moved with their children back to the house next to the mill. The noise coming from the plant operations significantly interfered with the enjoyment of their property and was believed to have caused health problems in various members of their family. The applicants repeatedly complained to the owners of the mill and to the Ministry of the Environment.

The mill is located in a small rural village that does not have a noise by-law. According to the applicants, MOE began abatement activities in the late 1980s, requiring the mill to apply for a certificate of approval (C of A) for noise abatement equipment. The first C of A was issued in 1992, requiring the mill to install silencers on the drying and aeration fans and to comply with ministry guidelines for noise emissions. Even with the silencers, say the applicants, the noise level was not greatly reduced. MOE issued an amended C of A in 1995, requiring the mill to meet more stringent noise level requirements, and to install a noise barrier along the property boundary between the mill and the applicants' property. Yet noise levels continued to be above the limits of the amended C of A, and to be a constant source of distress for the applicants. However, after an audit in 1998, the ministry concluded that the mill's noise abatement equipment met the requirements in its C of A.

In August 2000, the applicants filed an application for investigation under the *Environmental Bill of Rights*, which was accepted by MOE's Investigations & Enforcement Branch. In July 2001, the applicants were advised that charges had been laid under s. 14 (1) of the *Environmental Protection Act*, which prohibits the discharge of a contaminant – in this case, sound – into the natural environment if it causes or is likely to cause an adverse effect. Charges were laid for the time periods of October 15, 1999, to November 12, 1999, and October 29, 2000, to November 7, 2000. Charges could be laid back only to 1999 because of the two-year limitation period established under the *EPA*.

The mill pleaded guilty to the charges and was sentenced on June 14, 2002. The sentence was a fine of $15,000 and a requirement to comply with a number of conditions, including:

- ceasing operation of the existing east dryer and fans permanently.
- ceasing operation of blowers, fans and dryers, except the existing fixed aeration fans, east of the existing west dryer.
- installing new acoustical insulation on the entire west face of the applicants' residence, as well as new acoustical siding, new sealed windows, and central air conditioning.
- refraining from certain noisy activities between 5:00 p.m. and 7:00 a.m. daily.
- reducing noise caused by trucks going to the site.

The mill appealed some conditions of the court order and began negotiations with MOE and the applicants to purchase their property. MOE believes that this would be the best solution for the applicants. If the applicants receive a satisfactory offer for the sale of their home, MOE has agreed to ask that the Order be withdrawn.

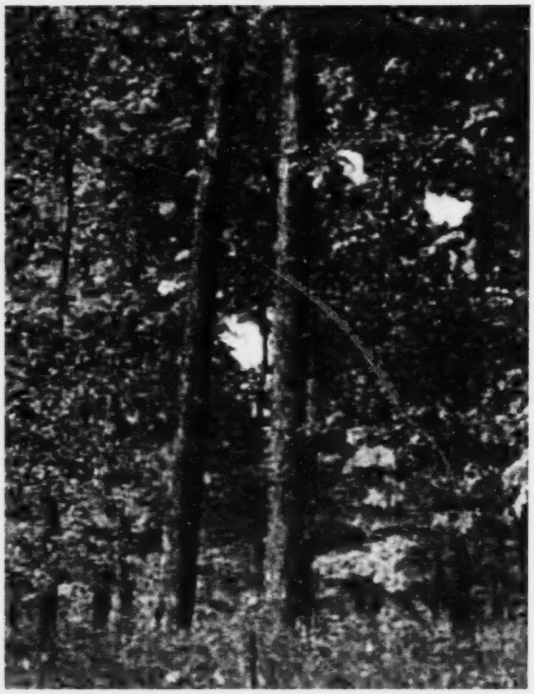
ECO Comment

The past three ECO annual reports have discussed the lack of enforcement of certain sections of the *EPA* and the *Ontario Water Resources Act* by MOE. In particular, the ECO is concerned with the low priority MOE has placed on enforcing contraventions of s.14 of the *EPA*. MOE has a statutory duty to enforce all aspects of the *EPA*, including contraventions of s. 14 due to noise, odour, dust and vibration. While these are considered "nuisances," exposure to high levels of such nuisances can seriously interfere with the use and enjoyment of people's property and cause adverse health effects. Their potential adverse effects are the reason they are included in the *EPA* definition of contaminants.

In 1997 MOE developed its *Procedures for Responding to Pollution Incidents Reports*. These procedures were supposed to help MOE to carry out its mandate by allowing the ministry to focus on larger and more environmentally significant problems. The procedures were part of a larger ministry Delivery Strategy and approach to compliance and enforcement reviewed in the ECO's 2000/2001 annual report (pages 72-84). In the *Procedures* document, noise and vibration from grain dryers and conveyance systems are listed as incidents that "require no further response" from MOE. If the ministry received an incident report related to noise, the complainant would be directed to call the local municipality, which usually had the authority to enact noise control by-laws.

The new *Municipal Act, 2001*, which came into force January 1, 2003, gave municipalities certain powers to prohibit and regulate noise, odour, dust, vibration and outdoor lighting. The *EPA* was concurrently amended to eliminate the need for MOE approval of municipal by-laws relating to noise and other nuisances, clearly pointing to the downloading of responsibilities for enforcement of contraventions for noise, odour and dust to municipalities. The ECO has commented previously about our concerns about the ability of some municipalities to take adequate action for these kinds of discharges.

In the case of Cook's Mill, the applicants experienced the adverse effects of noise discharges from the mill for 17 years. Although ultimately the mill was charged with and convicted of contravening s. 14 of the *EPA*, the case is a clear example of the lack of enforcement of provisions for noise pollution. The situation was made worse by the expansion of the mill, in what had been a primarily residential neighbourhood. The municipality may have made questionable land use decisions, and the ECO has no jurisdiction to review such decisions. However, the case remains an example of what can happen if municipalities are left to enforce the provisions in the *EPA* related to nuisance contaminants. Smaller municipalities will be forced to choose between the revenue and jobs created by industry and the health and well-being of their inhabitants. This type of conflict could be avoided if MOE continued to enforce cases of severe nuisance pollution.



This case demonstrates how the lack of enforcement of certain sections of the *EPA* can have serious impacts on the well-being of Ontario residents. The ECO questions why the applicants' concerns were not addressed sooner. It was not until the applicants were featured on a prominent news show, *Goldhawk Strikes Back*, and an application for investigation was filed under the *EBR*, that MOE took action to prosecute the mill and found that it had not been in compliance with environmental law for well over a decade.

Ultimately, the court order addressed the applicants' concerns. However, the charges were laid 17 years after the applicants first complained of the excessive noise from the mill. During that time, the plant was allowed to expand its facilities to increase its agri-food business and buy the lots surrounding the applicants' property, increasing their exposure to the noise.

Nevertheless, the ECO is pleased that the application for investigation resulted in further investigation and the laying of charges by MOE. The ECO believes that this application demonstrates the usefulness of the rights provided to the public by the *Environmental Bill of Rights*. *(For ministry comments, see page 209.)*

Clearcut Size Restrictions

On behalf of Earthroots, the Sierra Legal Defence Fund made an *EBR* application requesting the Ministry of the Environment to investigate whether the Ministry of Natural Resources had contravened forestry rules relating to clearcut size. In particular, the applicants have alleged that MNR failed to implement a 260-hectare restriction on clearcut harvesting stipulated by a 1994 Environmental Assessment Board decision. The applicants submitted evidence from forest management plans approved by MNR that demonstrate that the ministry has routinely permitted logging companies to plan clearcuts over 260 hectares.

The applicants alleged that MNR violated the *Environmental Assessment Act* by not complying with a key condition of the Class Environmental Assessment by the Ministry of Natural Resources for Timber Management on Crown Lands in Ontario (the Timber Class EA), which was in place at the time the application was submitted. (This Class EA has been revised and new rules are expected to be in place by June 2003.)

Background

In 1994, after a lengthy public hearing, the Environmental Assessment Board approved MNR's Timber Class EA, subject to a number of terms and conditions. One key condition addressed clearcut size. Condition 27 stipulated that:

> *"MNR shall implement a restriction on clearcut harvesting requiring a range of sizes of clearcuts not to exceed 260 hectares. MNR shall also develop standards for configuration and contiguity of clearcuts which will ensure that the purpose of this restriction is not frustrated.*
>
> *(a) These restrictions and standards shall be incorporated into the Environmental Guidelines for Timber Management Activities specified in Condition 94(b).*
>
> *(b) Silvicultural Ground Rules shall be prepared with the objective of ensuring that clearcuts are planned to a range of sizes and not consistently approach or meet the permitted maximum. Where for sound biological or silvicultural reasons individual or contiguous clearcuts exceed 260 hectares, they shall be recorded in the Plan as an exception to this condition, with reasons provided."*

In support of their application, the Sierra Legal Defence Fund included three forest management plans (FMPs) approved by MNR in 1999 for the period from 1999 to 2004, and in 2000 for the period from 2000 to 2005. This evidence showed that in the Gordon Cosens Forest, 76 per cent of the planned cuts are clearcuts over 260 ha, accounting for 98 per cent of the entire area cut in the unit. In the Wawa Forest, 25 per cent of the cuts are over 260 ha, accounting for 46 per cent of the total area cut. In the Temagami Forest, 29 per cent of the cuts are over 260 ha, accounting for 71 per cent of all the area cut in the FMP.

The applicants also alleged that in November 2001 MNR failed to incorporate these restrictions into the ministry's Forest Management Guide for Natural Disturbance Pattern Emulation (the NDPE), which is the document that MNR developed to meet Conditions 27(a) and 94(b). The NDPE says:

> "Accordingly, eighty percent (80 per cent – Boreal Forest) or ninety percent (90 per cent – Great Lakes – St. Lawrence) of planned new clearcuts determined by frequency, beginning with plans to be approved in 2004, should be less than 260 ha in size (standard). MNR believes this is consistent with the EA Board's direction that clearcuts should not routinely exceed 260 ha."

The applicants argue that basing the system for determining the allowed percentage of large clearcuts on "frequency" will result in the frustration of the EA Board's restriction. They said that numerous small clearcuts can be intentionally created so that some very large clearcuts are permissible. Once the "frequency" requirement has been met, there are no upper size limits on the remaining 10 and 20 per cent of clearcuts, and the NDPE can allow for most of the area harvested to be cut in a few very large clearcuts.

The Ministry of the Environment accepted the *EBR* application and carried out an investigation. MOE concluded that MNR was in compliance with Condition 27 of the Timber Class EA Approval, stating that the Condition allowed clearcuts above 260 hectares, provided there were "sound biological or silvicultural reasons" for doing so and they were documented. Moreover, MOE stated that Condition 27 did not specify the extent to which these exceptions should be permitted, and the Board's written reasons for the decision did not set out any specific limitations. MOE concluded that "... although the Board may have anticipated that exceedances of the 260-hectare limit would be the exception rather than the rule, no numerical cap was ordered on the number of clearcuts which may exceed 260 hectares." MOE's only comment on the forest management plans referred to in the *EBR* application was that all clearcuts over 260 hectares were recorded as exceptions with reasons, as required by Condition 27. MOE concluded that the NDPE Guide clearly includes the Board's restrictions and standards and that it finds MNR's interpretation reasonable.

MOE also informed the applicants that it had posted a proposed Declaration Order regarding the revised Timber Class EA on the Environmental Registry. MOE stated the proposed renewal of the Timber Class EA contained proposed conditions regarding clearcuts and invited the applicants to participate in the public consultation process on the proposal.

ECO Comment

A common sense reading of Condition 27 and the EA Board's "Reasons" for its decision, released in 1994, indicates that the Board intended to restrict the size of clearcuts to 260 hectares with few exceptions. The Board wrote then that "MNR told us to ignore the public's opposition to large clearcuts. It said the opposition was uneducated and emotional and motivated by social and political pressure. MNR said our job was to explain to the public the necessity for large clearcuts. We disagree." The Board wrote right into Condition 27 that it did not want its restriction on clearcut size to be "frustrated." Yet, nine years later, the evidence shows it was.

Rather than getting smaller, as intended by the EA Board, the actual size of average and maximum clearcuts has increased over the past few years. Average clearcut sizes in different forest management units reported for the boreal forest ranged from 29 to 479 hectares in 1997/98 and from 24 to 1,581 in 1999/2000. The same management units reported maximum clearcut sizes ranging from 59 to 2,119 hectares in 1997/98 and from 85 to 4,966 in 1999/2000. The largest single planned clearcut in a 2000-2005 FMP submitted in this *EBR* application was over 10,000 hectares. Thus, in the FMPs approved between 1997 and 2001, even though over 80 per cent of planned clearcuts were less than 260 ha, the majority of the area harvested was in clearcuts over 260 hectares.

In Condition 27, the Board also required MNR to report annually on the average and maximum size of clearcuts and to report its progress on implementing the Condition. The Board expected MOE to monitor this issue throughout the period of the approval and to decide at the end of the approval period, in 2003, whether clearcut restrictions should be continued. Yet, even when asked to investigate MNR's compliance with this term and condition, MOE did not provide any analysis of the information collected on Condition 27 such as the statistics above which show overall trends, nor did it comment on the evidence submitted by the *EBR* applicants related to individual FMPs.

In their response to this *EBR* application for investigation, MOE also acknowledged that the Board likely intended exceedances of the 260-hectare limit to be the exception rather than the rule. Yet, in its analysis of Condition 27, MOE determined that since the Board did not limit the size or number of the exceptions, legally Condition 27 permitted any number of clearcuts of any size, comprising any percentage of a harvested area, providing that they were documented as exceptions in a forest management plan.

In the lengthy Environmental Assessment Board hearing between 1988 and 1992, MNR's position was that there was no credible evidence to support restricting clearcut size, and that large clearcuts were necessary to emulate natural forest fire disturbances. After the 1994 EA Board Decision, the ministry continued to develop its policy of emulating natural disturbances, writing that principle into the *Crown Forest Sustainability Act*. The ministry also prepared an analysis of historical fire records that was used in the preparation of FMPs, resulting in the larger planned clearcuts. MNR's current review of the Timber Class EA says that larger clearcuts are "...consistent with the *Crown Forest Sustainability Act* principle to emulate natural disturbances and landscape patterns, and the sustainability indicator in the Forest Management Planning Manual, which requires FMPs to show movement towards emulation of natural disturbance frequency by size class." This policy was finalized in MNR's NDPE Guide in 2001. (The ECO's review of MNR's NDPE Guide appeared in the ECO 2001/2002 annual report and Supplement.)

The ECO believes that the EA Board's "260-hectare restriction" was never really implemented, given the predominance of exceedances. It also could be argued that the Ministry of Natural Resources has never accepted the EA Board's position on clearcuts – and that the Ministry of the Environment has chosen to accept MNR's interpretation. The 260-hectare restriction, if implemented, would have conflicted with MNR's new policy direction now mandated in the *Crown Forest Sustainability Act* and the Forest Management Planning Manual.

The end of the nine-year EA Board approval period has arrived. As of the time of writing, it is proposed that the Board's Condition 27 will cease to exist when the revised Timber Class EA is approved by MOE. It has been replaced with a reference to MNR's "approved forest management guide, as revised from time to time, relating to the emulation of natural disturbance patterns." At present this refers to the NDPE Guide, with its frequency-based restriction on clearcuts over 260 hectares. As of May 2003, the proposed Timber Class EA renewal Declaration Order had been posted by the Minister of the Environment for public comment, and was expected to be approved before the existing Class EA expired in June 2003. (For more detail on this application for investigation, see pages 254-258 in the Supplement to this annual report.) *(For ministry comments, see page 209.)*

Rocky Island Lake: Alleged Contravention of the *Lakes and Rivers Improvement Act*

In October 2002, two *EBR* applications were submitted to the Ministry of Natural Resources by local residents who had noted, and photographed, the essentially drained condition of Rocky Island Lake earlier that summer. The removal of water from the reservoir had killed game fish such as pickerel, destroyed habitat, and endangered wildlife dependent on the ecology of the lake. The draining of the lake disrupted shoreline activities and public enjoyment, and made boat launch impossible. The applicants were also concerned that the muddy bottom of the reservoir was dangerous to moose and other wildlife.

The first of the *EBR* applications requested an investigation of the operations of Great Lakes Power, Inc., alleging contraventions of sections 16 and 17 of the *Lakes and Rivers Improvement Act (LIRA).*

The second application requested a review of the same two sections of the Act, as well as s. 23, alleging that the Act fails to achieve its stated purposes, which include the provision for:

- "the protection and equitable exercise of public rights in or over the waters of the lakes and rivers of Ontario";
- "the protection of the interests of riparian owners"; and,
- "the management, perpetuation and use of the fish, wildlife and other natural resources dependent on the lakes and rivers."

The applicants were aware that in June 2002, the ministry had modified the *Lakes and Rivers Improvement Act* to state that the minister "may order" operators of waterpower sites to prepare Water Management Plans (WMPs), but they felt that the assurance of minimum water levels under the plans should be mandatory rather than at the discretion of the minister. (See also Water Management Planning Guidelines for Waterpower, pages 108-112.)

The Mississagi River is located in the Sudbury and Algoma Districts north of Lake Huron, and has its origins at Biscotasi Lake, some 110 kilometres northeast of the City of Elliot Lake. The river runs southwest through Mississagi River Provincial Park to Rocky Island Lake, which is the primary reservoir for hydroelectric production on the Mississagi River. Further south, the river passes through more parkland, then through a series of four hydroelectric generating stations and a number of lakes and reservoirs, prior to emptying into the North Channel of Lake Huron just west of the Town of Blind River. The river supports a range of aquatic ecosystems and human uses, including swimming, canoeing, angling, seasonal and permanent residences, and tourism operations.

Between 1950 and 1970, four hydroelectric generating stations were built on the Mississagi River. In May 2002, shortly after the Ontario government opened the electricity market to competition, Brascan Corporation purchased all four of the generating stations and related control structures on this river system from Ontario Power Generation, Inc. The four generating stations on Rocky Island Lake have a combined generating capacity of 488 MW and are operated as peaking facilities, which means that they store water in their reservoirs for use during peak electricity demand hours. Great Lakes Power/Mississagi Power Trust, which is a subsidiary company of Brascan Corporation, operates these facilities.

During the summer of 2002, a long heat wave caused a surge in electricity demand and pushed hydroelectric prices sharply upward. Demand pushed all facilities, including those on the Mississagi, to produce as much power as continuously as possible. As a result, the water level of Rocky Island Lake continued to drop until, by July 2002, it was essentially empty.

MNR denied both of the applications. In its response to the applicants who requested an investigation of Great Lakes Power, Inc., MNR stated that the control of water levels in Rocky Island Lake in the summer of 2002 did not relate to any alteration, improvement or repair of a dam by Great Lakes Power, and, therefore, that s.16 of *LRIA* would not apply. The ministry also noted that *LRIA's* s.17 applies only to the minister, so that contravention by the producer would not be possible. MNR did not, however, dispute that the water level had dropped and caused the conditions described by the applicants.

The ministry provided a thorough response to the application for investigation. It looked not only at the *LRIA* but also at possible contraventions of s. 35(2) under the *Fish and Wildlife Conservation Act (FWCA)*, *Fisheries Act* and other federal legislation. Prior to the receipt of the *EBR* application, ministry staff flew over the affected area (in July and August 2002) and conducted three ground inspections in order to assess possible contraventions. MNR pointed out that it no longer enforces the habitat disruption sections of the federal *Fisheries Act*. At the suggestion of the ECO, the applicants subsequently sent a copy of their application material to the federal Office of the Auditor General so that the issues raised would be subject to the environmental petition process under the *Auditor General Act*. The petition resulted in an investigation by Fisheries and Oceans Canada into possible contraventions of the federal *Fisheries Act*.

Although MNR provided a response to the *EBR* application for investigation within the prescribed 60-day period, the ministry was one month late in its response to the *EBR* application for review. In denying this application, MNR stated that it did not believe a review needed to be undertaken of the referenced sections of the *Lakes and Rivers Improvement Act (LRIA)* because "harm to the environment is unlikely due to the actions already recently taken by the ministry." Specifically, MNR pointed out that amendments to the *LRIA* were completed in June 2002, that comprehensive guidelines for the preparation of Water Management Plans for Waterpower were approved by the minister in May 2002, and, finally, a water management planning process for the Mississagi River has recently been initiated. However, the water management plan for the Mississagi River will not be completed until December 31, 2006.

In its response to the applicants, the ministry also indicated that in the fall of 2002, MNR's Sault Ste. Marie District Office had established a committee of representatives from Great Lakes Power, the Mississagi First Nation, recreational users and the commercial tourism industry. This committee will identify issues resulting from the recent operations of the system and make recommendations. These parties have negotiated a voluntary operating plan to bridge the period from the present until December 31, 2006, when the new water management plan will take effect. Despite these assurances, the operator of the four Great Lakes Power generating stations on the Mississagi has stated that this summer the company will again be operating "within the legal limits, as we did this past year."

ECO Comment

In November 2002, the ECO issued a special report entitled: "Climate Change: Is the Science Sound?" In this report, we presented the case that human-induced climate change is in fact occurring, and that a "business as usual" approach is no longer an option. In its *10-Year Outlook* report of 2003, the Independent Electricity Market Operator, which oversees electricity generation capacity in Ontario, has recognized the broader problem of demands on hydroelectric facilities, stating that dry seasons or extensive operation of peaking facilities to meet high demand over a period of time, such as in 2002, can result in "insufficient water available in storage reservoirs to support required levels of operation later within that period."

In addition to the potential for climate change issues, the Rocky Island Lake incident underscores the potential for problems resulting from changes in ownership of hydroelectric facilities. Against this background, MNR's introduction of water management planning is very timely and affords the potential for the natural resource values of river systems to be put on an equal footing with the economic values of hydropower generation.

Having Regard to the *Planning Act?*

In October 2002, the Preservation of Agricultural Lands Society (PALS) requested that the Ministry of Municipal Affairs and Housing undertake a review of the *Planning Act*. The applicants believe that 1996 amendments to the Act have weakened its ability to protect the environment, resulting in land use decisions that are contrary to the government's own provincial interests as set out in the Provincial Policy Statement (PPS). These land use decisions, argue the applicants, have led to land fragmentation, urban sprawl, and the loss of agricultural lands and natural heritage features, along with reduced biodiversity.

Although MAH is currently reviewing the Provincial Policy Statement, as required by the *Planning Act*, the applicants believe that changes to the PPS alone will do little good. They argue that because of the 1996 amendments to the *Planning Act*, planning authorities such as municipalities are not unequivocally obligated to implement the PPS. These amendments to the Act, PALS believes, must be reversed, or at least reconsidered, if the environment is to be protected. (See the Supplement to this report for a full history of Ontario's efforts to protect agricultural land, pages 323-328.)

The applicants pointed out that the 1996 amendments to the *Planning Act* changed the previous requirement that all land use planning decisions be "consistent with" Provincial Policy Statements. This wording was deemed to be too inflexible by some developers and municipalities. Under the 1996 amendments to the legislation, municipalities, provincial ministries, the Ontario Municipal Board (OMB), and other decision-makers must now only "have regard to" Provincial Policy Statements. This wording change allows for greater municipal discretion and less provincial control.

Ontario's planning system is governed by a policy-driven framework, and one of the functions of the Provincial Policy Statement is to guide local agricultural land protection policies. The PPS states that prime agricultural areas "will be protected for agriculture. Permitted uses and activities in these areas are: agricultural uses; secondary uses; and agriculture-related uses. Proposed new secondary uses and agriculture-related uses will be compatible with, and will not hinder, surrounding agricultural operations." Further, the PPS discourages new lot creation in prime agricultural areas, stating that an area may be excluded from prime agricultural areas only if it meets certain criteria.

As a result of the changed wording in the *Planning Act*, many municipalities today are not properly implementing the policies of the PPS, the applicants allege. And because PPS policies are no longer binding, the Ontario Municipal Board also has more discretionary power now over cases referred to it, weakening the ability of municipalities to enact controls on development by strictly applying the PPS. As illustration of its argument, PALS cited a recent Ontario Municipal Board case in which the presiding OMB member ruled that a municipality could not impose criteria to protect agricultural lands threatened by the expansion of a golf course driving range. No alternative site met the needs of the golf course in question, the OMB member ruled, and approval was then granted to develop an area that had been zoned as prime agricultural lands so that the golf course could remain "au courant" with industry standards.

In response to the PALS application, MAH concluded that a review of the *Planning Act* was not warranted at this time, citing the extensive public consultation process undertaken when significant amendments were made to the Act in 1995 and 1996. Further, MAH stated, these amendments were enacted precisely because the previous planning system was perceived to be too slow and inefficient, the PPS was seen to be too prescriptive and inflexible, and municipalities required greater autonomy and responsibilities.

Moreover, according to the ministry, the *Planning Act* does oblige the consideration of the Provincial Policy Statement through its "have regard to" provision. The changed wording also allows decision-makers to implement the PPS in the context of their other planning objectives and local circumstances. It is the position of the ministry that most municipalities take the PPS seriously and provide for its implementation, discouraging urban sprawl and promoting the efficient use of land and resources. MAH also asserted that decision-making bodies must be prepared to demonstrate why specific provisions of the PPS are not applicable if they are not implemented.

ECO Comment

The ECO agrees with the ministry's decision to deny this application for review. However, the ECO does not concur with the ministry's rationale for denying it – namely, that the *Planning Act* was the subject of extensive public consultations in 1995 and 1996, and that it is satisfactory in its present form. Instead, the ECO believes the applicants raised legitimate concerns about Ontario's planning system, but that these concerns may best be addressed in the context of MAH's current review of the Provincial Policy Statement and through its ongoing consultations on the ministry's "Smart Growth" initiative. (See pages 65-67 for more information on Smart Growth.) While MAH does discuss the current reviews of the PPS and Smart Growth in its denial of this application, it does not use them as grounds for turning down the application.

In July 2001, MAH formally launched its review of the PPS, required every five years by the *Planning Act*. In its notice on the Environmental Registry, the ministry states that the review is, in part, designed to identify any implementation issues that may need to be addressed and to examine as well the extent to which the PPS is effectively applied at the local level. During the review, the sufficiency of the "have regard to" language of the *Planning Act* has been raised by stakeholders. It has also been raised as a significant issue during the public consultations on Smart Growth. Thus, in its denial of the application for a review of the *Planning Act*, the ECO believes that MAH should have told the applicants that their concerns are being addressed through the ongoing reviews of the PPS and the public consultations on Smart Growth.

Many of the ECO's previous annual reports have raised concerns about the province's planning system, particularly with regard to urban sprawl and the protection of Ontario's natural heritage. The ECO believes that the PPS is applied by municipalities and the Ontario Municipal Board in an inconsistent manner. For example, the OMB's interpretation of the "have regard to" language of the *Planning Act* and the extent to which the PPS is implemented may vary, depending upon which OMB member is presiding.

As the ECO observed in our 2001/2002 annual report, the review of the Provincial Policy Statement must examine how its policies have been implemented. Thus, the review of the PPS inherently requires an assessment of the "have regard to" provision and the enactment of any necessary changes to the *Planning Act*.

Species at Risk

Asking that the list of protected species in Ontario be expanded, the Federation of Ontario Naturalists (FON) and Sierra Legal Defence Fund (SLDF) filed an *EBR* application for review in 2002 asking the Ministry of Natural Resources to consider amending Regulation 328 under the *Endangered Species Act (ESA)*. This is the regulation that lists the flora and fauna the ministry has declared to be "threatened with extinction."

Regulation 328 was last amended in March 2003, subsequent to this application. It currently lists 19 species of fauna and 17 species of flora. The applicants believe that the regulation is deficient because it doesn't list all of the species in Ontario that have been identified as endangered and threatened by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). COSEWIC is the body responsible for listing species at risk across Canada under the federal *Species at Risk Act*.

While MNR did add three species in 2001 – the few-flowered club rush, the horsetail spike-rush, and the slender bush clover – and seven more in early 2003, Regulation 328 only affords protection to approximately half of the species identified as endangered by COSEWIC. COSEWIC has identified 59 "endangered" species in Ontario, while Reg. 328 recognizes only 27. Further, COSEWIC has identified 40 "threatened" species in Ontario, while Reg. 328 recognizes only one of these species.

The applicants also argue that Reg. 328 should include all of the species native to Ontario that have already been assigned a rank of "S1" by the ministry's Natural Heritage Information Centre (NHIC). These are species identified as extremely rare in Ontario, usually with five or fewer occurrences in the province or very few remaining individuals. There are currently 530 species ranked as S1 in Ontario.

Endangered species identified by COSEWIC, but not regulated by MNR under the *ESA*

Fauna:	Flora:
American Badger (jacksoni)	Red Mulberry
Northern Bobwhite	Engelmann's Quillwort
Acadian Flycatcher	False Hop Sedge
Barn Owl (eastern population)	Pitcher's Thistle
Aurora Trout	Toothcup
Wavy-rayed Lampmussel	Purple Twayblade
Mudpuppy Mussel	Skinner's Agalinis
Northern Riffleshell	Gattinger's Agalinis
Snuffbox	Spoon-leaved Moss
Rayed Bean	Eastern Prairie Fringed Orchid
Northern Madtom	Small-flowered Lipocarpha
Pugnose Shiner	Scarlet Ammania
Kidney Shell	Bluehearts
Round Hickorynut	White Prairie Gentian
Woodland Caribou (boreal pop.)	American Ginseng
Grey Fox	Virginia Goat's rue
Least Bittern	Showy Goldenrod
Hooded Warbler	Bird's-foot Violet
Butler's Gartersnake	Kentucky Coffee Tree
Jefferson Salamander	American Water-willow
Fowler's Toad	Crooked-stem Aster
Eastern Massasauga Rattlesnake	Western Silver-leaved Aster
Black Rat Snake	White Wood Aster
Eastern Fox Snake	Dense Blazing Star
Eastern Hog-nosed Snake	American Chestnut
Queen Snake	Colicroot
Shortjaw Cisco	Lakeside Daisy
Shortnose Cisco	Deerberry
Blackfin Cisco	Goldenseal
Channel Darter	Round-leaved Greenbrier
Eastern Sand Darter	Wild Hyacinth
Spotted Gar	Small-flowered Lipocarpha
Black Redhorse	Willowleaf Aster
Deepwater Sculpin (Great Lakes)	Common Hoptree
Lake Whitefish (Lake Simcoe)	
Eastern Spiny Softshell Turtle	
Lake Chubsucker	
Stinkpot	

FON and SLDF contend that MNR has made little progress in listing species under the *ESA* – in fact, four of the species currently listed under the *ESA* are believed to have already disappeared entirely from Ontario. Habitat loss is among the most significant threats for almost every endangered species in Ontario, and the applicants believe they must be immediately protected.

The applicants contend that MNR should undertake the review of Regulation 328 because of commitments the province has already made to protect species at risk. In 1996, Ontario signed the National Accord for the Protection of Species at Risk, in which the provinces and territories of Canada agreed "to prevent species in Canada from becoming extinct as a consequence of human activity" and "to establish complementary legislation and programs that provide for effective protection." In allowing species to decline toward extinction when protections are available under the *ESA*, say the applicants, MNR is violating its commitment to upholding the Canadian Biodiversity Strategy.

MNR denied this application, saying that the public interest does not warrant a review of these issues. Furthermore, the ministry stated, the regulation of species at risk constitutes only part of the listing process. Pre-consultation with landowners of properties on which a species occurs is also critically important, because it gives MNR an opportunity to verify the occurrence of the species, inform the landowner of the ministry's intent to regulate the species, and inform them of the legal implications of the *ESA*. This process, said MNR, can be very time-consuming.

The ministry also stated that while the goodwill of landowners is essential to the long-term protection and recovery of species at risk, pre-consultation is also necessary to ensure that the prohibition section of the *ESA* can be enforced by being able to demonstrate "wilful" intent. The *ESA* states that no person shall wilfully "destroy or interfere with or attempt to destroy or interfere with the habitat of any species of flora or fauna." Without pre-consultation, it would not be possible to demonstrate wilful harm, according to the ministry, since individuals could assert they were not aware of the presence of a species or its legal status.

The ministry also stated that the consideration of additional species for Reg. 328 is part of MNR's ongoing business, and thus the matter is already subject to periodic review. As of March 2003, there were 32 species under consideration to be added to Reg. 328. In January 2002, MNR proposed adding seven of these species to Reg. 328, and the regulation was amended in March 2003 to include them, after the ministry made the decision to deny this application for review. In April 2003, MNR proposed the addition of four more species to Reg. 328. The ministry also asserted that it is currently reviewing its Vulnerable, Threatened, Endangered, Extirpated, and Extinct list.

It is the ministry's position that the wording "threatened with extinction" in section 5 of the *ESA* describes a level of risk associated with species recommended for "endangered" status at both the provincial and national levels. Although a species may have been designated as nationally "threatened" by COSEWIC, the ministry said it is not considered for listing in Reg. 328 under the *ESA* unless it has also been recommended by MNR for "endangered" status in Ontario. The ministry asserts that aquatic species will not be included in Regulation 328, since they are under federal jurisdiction and are protected under provisions of the federal *Fisheries Act*. MNR also stated that the 530 species the ministry recognizes as being extremely rare – those with a rank of S1 – will not be regulated under the *ESA* until they are elevated by COSEWIC or MNR to the more critical rank of "endangered."

ECO Comment

The ECO disagrees with MNR's decision to deny this application for review. FON and SLDF raised legitimate concerns in requesting the ministry to revise Reg. 328 to give protection to Ontario's species at risk. The ECO agrees with the applicants that it is in the public interest for the ministry to conduct a review of the issues raised in this application, and that MNR should undertake a comprehensive assessment of Ontario's current policies, regulations and statutes, and enact appropriate changes to conserve the province's biodiversity.

The ECO is concerned that MNR is unreasonably delaying the regulated protection of these species because of its protracted landowner consultations. While consulting affected landowners and obtaining their goodwill is laudable, it should not be at the expense of the necessary legal protection that should be given to these species.

In our 1999/2000 and 2001/2002 annual reports, the ECO reported that species at risk are inadequately protected in Ontario because of a confusing blend of generally outmoded and ineffective laws and policies. The ECO has encouraged MNR to initiate the necessary public debate to assess options that would effectively prevent the loss of species and their habitat in Ontario, including options to improve recovery planning and implementation. However, Ontario's legislative, regulatory and policy frameworks remain essentially unchanged.

In the past, the ECO has also commented on the discrepancy between the number of endangered species in Ontario listed by COSEWIC and those regulated by MNR under the *ESA*. The ECO also recommended that MNR develop a provincial biodiversity strategy to guide such decision-making. Most of the legislation dealing with biodiversity issues — including the *ESA* — is outdated and requires revision.

MNR has acknowledged that internally the ministry has identified the need for significant revisions to its legislative, regulatory and policy frameworks governing species at risk. In its internal project plans, the ministry has made commitments to develop separate policies by 2002 that would address recovery planning, listing and regulating procedures, and landowner contact procedures. These are interim guidelines for use by MNR staff, said the ministry, and will not be placed on the Environmental Registry for public comment. Nor did the ministry share these plans with the applicants when their application for review was denied. MNR has also internally identified the need to revise the *ESA* to harmonize it with the federal *Species at Risk Act*, which was passed in 2002. MNR should not have denied this application for review, as MNR's internal plans coincide so closely with the recommendations of the applicants.

The ministry has committed itself publicly to developing a Provincial Species at Risk Strategy by 2003. MNR has stated that it intends to contact key stakeholders during the consultation process and that it will place the strategy on the Environmental Registry for public comment.

The ECO encourages MNR to follow through on the goals the ministry has set internally for its staff – to revise the *ESA* and the regulations that should protect Ontario's species at risk, and to ensure that these revisions harmonize with and complement the federal *Species at Risk Act*. Any revisions of the existing legislation should include measures to recognize and afford protection to Ontario's endangered and threatened species, in addition to species of special concern.

By revising the *ESA* and releasing its Provincial Species at Risk Strategy, MNR would be making progress toward its 1996 federal-provincial commitment "to establish complementary legislation and programs that provide for effective protection of species at risk throughout Canada." The revision of the *ESA* and the content of a Provincial Species at Risk Strategy should be guided by the overall context of developing and implementing a provincial biodiversity strategy. (See pages 49-53 on Creating a Biodiversity Framework for Ontario.)

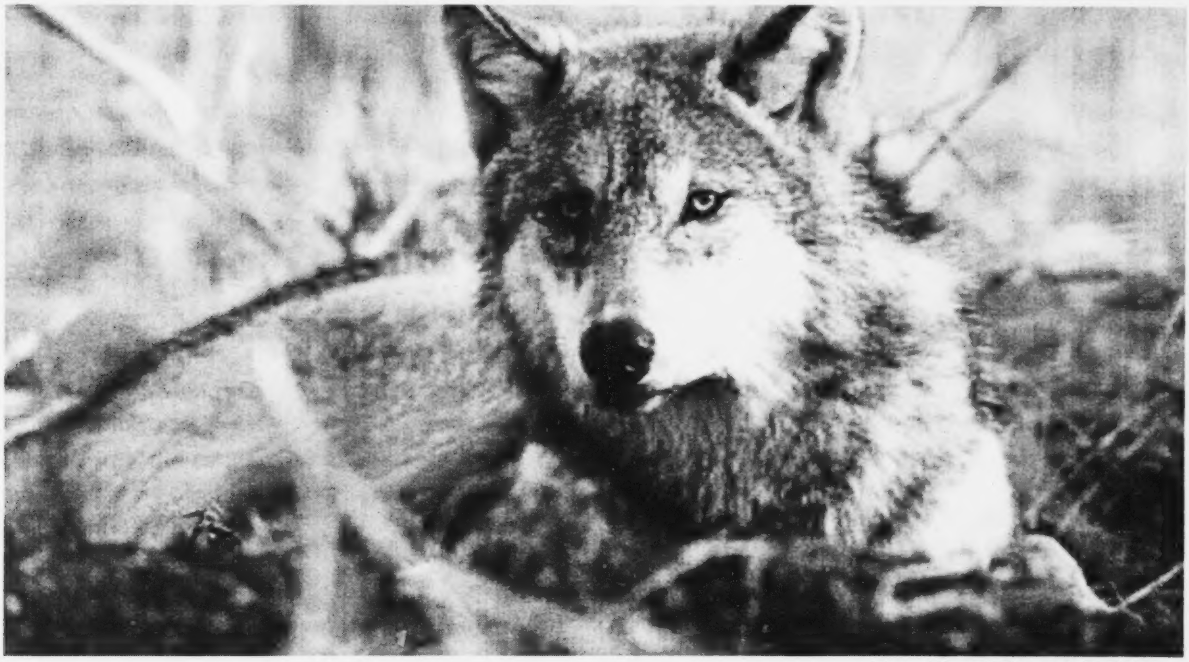
(For ministry comments, see page 209.)

Recommendation 9

The ECO recommends that the Ministry of Natural Resources create a new legislative, regulatory and policy framework to better protect Ontario's species at risk and to conform with federal legislation.

Wolf Conservation Strategy

The Ottawa Valley Chapter of the Canadian Parks and Wilderness Society (CPAWS) and the Sierra Legal Defence Fund (SLDF) filed an *EBR* application requesting that the Ministry of Natural Resources review its "indeterminate" classification of the eastern wolf *(Canis lycaon)*. Instead, once a species is classified with a level of risk on the MNR's list of Vulnerable, Threatened, Endangered, Extirpated or Extinct Species (VTEEE), it may then merit protective measures under other government policies and legislation, such as under the *Endangered Species Act* or the *Planning Act*.



John and Karen Hollingsworth/USFWS

The applicants are also requesting that MNR consider creating a provincial conservation strategy for both eastern wolves and gray wolves (*Canis lupus*). CPAWS and SLDF assert that the ministry's management of these two species should be based on modern scientific principles to ensure that Ontario's biological diversity is maintained.

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) estimates the number of eastern wolves at 2,000 individuals spread among approximately 500 packs, found mainly in the Great Lakes and St. Lawrence regions of Quebec and Ontario. These estimates of range and population size are disputed by MNR. The highest population densities are reportedly found in southwestern Quebec and southeastern Ontario, particularly in Algonquin Provincial Park. The eastern wolf has been extirpated from the more populated southern portions of its range because of the loss of habitat.

The gray wolf is found in northern Ontario. Gray wolves have a larger build than eastern wolves, which are more like coyotes in appearance. Both gray wolves and eastern wolves are recognized as keystone species due to their disproportionately important role as top predators in the functioning of ecosystems. Unfortunately, little data exist on the populations and ranges of either of these species across Ontario.

In May 2001, COSEWIC identified the eastern wolf as a national "species of special concern." MNR has revised its provincial VTEEE list several times since then, but the ministry has failed to upgrade the status of the eastern wolf from "indeterminate" to "vulnerable." Much of the information about the species that was used to determine the national listing was based on Algonquin Provincial Park's eastern wolf population, but the applicants believe that the provincial listing of "indeterminate" does not accurately reflect available scientific research.

The applicants contend that Ontario's current system of wildlife management cannot be relied upon to protect wolf populations. The *Fish and Wildlife Conservation Act (FWCA)* currently classifies wolves as fur-bearing mammals and allows an almost year-round open season for hunting and trapping with no bag-limits across most of the province. The legislation also does not distinguish between the two species, with the ministry labelling the eastern wolf as a subspecies of gray wolf. MNR has in fact co-funded genetic work that has demonstrated that the eastern wolf is a distinct species, but the ministry has refused to reflect this finding in any of its policies or legislation.

The applicants contend that the lack of reporting requirements – because of the open-season, no-bag-limit hunting season – has contributed to the mismanagement of Ontario's wolf populations. Information obtained by the applicants under the *Freedom of Information and Protection of Privacy Act* reveals that the ministry possesses little quantitative data for Ontario's wolf populations and that management decisions are being based on speculation. The applicants argue that MNR is incorrectly operating under the assumption that wolf populations can sustain unlimited harvesting. In the few cases where scientific research has been carried out, such as in Algonquin Provincial Park, wolf populations are declining due to human-caused impacts.

CPAWS and SLDF are concerned that MNR is actively promoting the recreational killing of wolves. Promotional material issued by the ministry for out-of-province visitors describes wolf-hunting as an "exciting" recreational opportunity. The applicants contend that MNR's encouragement to hunt these species is inappropriate given that the ministry has negligible data on them and that the eastern wolf is listed nationally as a species at risk. In February 2002, the applicants requested that MNR withdraw this promotional material, but the ministry chose not to do so. It is MNR's position that "there is no evidence that the current level of wolf harvest poses a threat to wolves at the provincial scale."

The applicants believe that protected areas should play a fundamental role in ensuring viable wolf populations, as when the ministry enacted a wolf-hunting moratorium until 2004 in the townships surrounding Algonquin Provincial Park. But since hunting is still permissible in a large number of Ontario's other protected areas, the applicants believe that inadequate protection is afforded by the governing legislation and policies.

In the absence of province-wide data, the applicants contend that MNR is not respecting its commitment to the precautionary principle through its existing policies and practices. CPAWS and SLDF believe that an effective wolf conservation strategy should contain the following objectives:

- ensure the long-term survival and flourishing of both of Ontario's wolf species.
- retain natural predator-prey dynamics across the Ontario landscape.
- retain wolf pack structure, function and behaviour.
- retain natural wolf population structure and function across Ontario.

MNR denied this application, stating that a review was not warranted since the ministry has enhanced its species at risk program through the Ontario Living Legacy initiative. The ECO disagrees with this rationale, because the central point of the application was that MNR does not officially recognize the eastern wolf as a species at risk. The ministry also stated that since it is already reviewing its VTEEE list, there is no need for another review on the same topic.

ECO Comment

The ECO believes that MNR should not have denied this application for review. In March 2002, the applicants were told in writing by the Director of MNR's Fish and Wildlife Conservation Branch that the next revision of the list would reclassify the status of the eastern wolf from "indeterminate" to "vulnerable." In September 2002, MNR revised the VTEEE list without making the promised change. The ministry also revised the list in June 2003, again without making the promised change. Therefore, the ECO believes that MNR's rationale for denying this application is flawed since the ministry's 2002 and 2003 revisions did not address the concerns raised by the applicants.

The ECO, along with many stakeholders, has repeatedly noted the discrepancy between the number of species at risk in Ontario listed federally by COSEWIC and those recognized provincially by MNR (see Species at Risk, pages 134-138). This discrepancy still exists and is reflected in MNR's VTEEE list. The ECO encourages the ministry to recognize the eastern wolf formally as a species at risk to reflect the status of this species under the federal *Species at Risk Act*.

MNR informed the applicants that a provincial wolf conservation policy is not warranted, since Ontario's wolf populations are considered healthy across their ranges. The ministry also asserted that there is no evidence that the present level of hunting and trapping is posing a threat to their sustainability. Unfortunately, MNR did not provide any quantitative data to support their claim or to reassure the applicants.

The ECO believes that MNR should make decisions based on scientific principles and data to conserve Ontario's wolf populations. There are significant gaps in the scientific study of wolves, despite what is known about their social behaviour and physiology. This is clearly evident in the lack of estimates of wolf population numbers and their current ranges, particularly as they apply to Ontario. The ECO believes that a central purpose of a provincial strategy should be to address this lack of information.

History and science have revealed that keystone species such as wolves should not be managed on the premise that they be harvested on a sustained yield basis. Wolves have evolved to fulfil an ecological niche different from that of prey species such as moose and deer, and require a different approach to their management. The ECO concurs with the applicants that both the management of this species and a provincial conservation strategy should be based on the precautionary principle.

The ECO recommended in its 2001/2002 annual report that MNR maintain the moratorium on the hunting and trapping of eastern wolves in the townships surrounding Algonquin Provincial Park until such time as the population is scientifically demonstrated to be viable (see also page 175 on this issue). Currently, this moratorium will end in June 2004. Adequate monitoring data is necessary for MNR to make scientifically informed decisions. The monitoring of wolf populations across the province would also be consistent with the Population Habitat Viability Assessment report conducted for the Algonquin Wolf Advisory Group that recommended "a regional focus beyond the boundaries of Algonquin Provincial Park and consideration of ecological connectivity to adjacent areas is necessary to address the wolf issue."

The Province of Ontario has committed to protecting species such as the eastern wolf by means of the National Accord for the Protection of Species at Risk and the National Statement of Commitment to the Canadian Biodiversity Strategy. It is the intention of this Strategy that governments protect and restore "viable populations across their natural historical range." As such, it is necessary that MNR actively monitor the status of this species in locations other than just those areas surrounding Algonquin Provincial Park. The ECO believes that the development and implementation of species-specific strategies should be carried out in the context of a provincial biodiversity strategy and species at risk strategy (see Creating a Biodiversity Framework, pages 49-53).

Despite denying this review and dismissing the applicants' concerns, MNR will likely have to develop a management strategy for the eastern wolf, as required by the federal *Species at Risk Act*. Since the eastern wolf is listed nationally as a "species of special concern," MNR will likely take the lead role in the development of this management plan for eastern wolves and their habitat in Ontario. A proposed management plan must be developed within the five years following the enactment of the federal *Species at Risk Act* in June 2003. This management plan would be placed on a federal species at risk registry for public comment and subsequently reviewed every five years. *(For ministry comments, see page 210.)*

Fly Ash Handling at the SWARU Incinerator

For nearly 30 years, the SWARU incinerator, which burned about 40-60 per cent of Hamilton's municipal solid waste, was an environmental concern for many Hamilton residents. The ECO's 2001/2002 annual report described the incinerator's air emissions and ash management problems, after residents used the *Environmental Bill of Rights* to request a wide-ranging review of the facility's certificates of approval (Cs of A). That first *EBR* application, submitted in May 2000, had prompted the Ministry of the Environment to take a close look at the facility's handling of fly ash.

The incinerator produced up to 30 tonnes of fly ash per day. Fly ash is fine ash filtered from combustion flue gases, and may contain elevated levels of heavy metals and other toxins. From the time the incinerator started up in 1972 until 1990, fly ash was sent to the local Glanbrook Municipal Landfill site untreated, a legal form of disposal at that time. In 1990, new provincial rules came into effect, requiring fly ash to undergo a leachate toxicity test. SWARU's fly ash failed this test, primarily because of high levels of leachable cadmium and lead. Under the new rules, the ash required much more expensive disposal at a hazardous waste disposal site.

Then, in 1992, the operator of the SWARU facility at the time (Laidlaw Inc.) proposed to stabilize the fly ash, using a patented process that was supposed to prevent the toxic metals from leaching out. This allowed Laidlaw to dispose of the fly ash at the local municipal landfill site — a much cheaper solution. MOE issued a provisional certificate of approval that allowed this approach, but also required that a semi-annual summary report of the stabilization process be submitted to the ministry. However, from 1994 to 2000, reports were not submitted to MOE, nor did the ministry request the information.

Prompted by the *EBR* request for a review, MOE finally realized in 2000 that the required reports summarizing fly ash test results had not been submitted, and also found questionable analytical data for the stabilized ash. It appeared that the stabilization process had not been working as expected, and the treated fly ash had in fact exceeded regulated limits for leachable cadmium and lead a number of times between 1994 and 2000. During this time, the incinerator operators deposited a number of loads of fly ash that had failed the leachate toxicity test at the Glanbrook Municipal Landfill, in contravention of the C of A.

Several investigations of the 1994-2000 handling of fly ash were then undertaken, amid high public interest and media attention. In 2000, Canadian Waste Service Inc., the contractor operating the incinerator on behalf of the municipality, hired a private investigator. MOE also launched an internal investigation by its own Investigations and Enforcement Branch (IEB), which was completed in June 2002, though results were not released. MOE stated that charges were not recommended.

In June 2002, two Ontario residents requested an *EBR* investigation of how SWARU's fly ash was handled over the period 1994-2000. The applicants alleged that Laidlaw Inc., which had managed the incinerator for the municipality for most of that time, had contravened the *Environmental Protection Act* by allowing an illegal discharge into a landfill site.

In August 2002, MOE denied the request for the *EBR* investigation, stating that the ministry's IEB had just finished investigating the handling of fly ash by SWARU's operators. However, the ministry failed to share the results of the IEB investigation with the applicants. The ministry provided a lot of detail on the current testing and handling of fly ash, but no detail on the past handling of fly ash over the period 1994-2000, which was the key concern for the applicants. The ministry did provide a brief explanation of why charges were not laid after the IEB investigation: ". . . insufficient evidence, the age of some of the offences and that a conviction was unlikely."

The ministry was justified in denying the June 2002 *EBR* request for an investigation of fly ash handling, since ministry staff had just completed a detailed IEB investigation of the same issues. But the ECO is very troubled by the ministry's failure to share a summary of the IEB investigation results with the applicants. The applicants had specific questions about past practices, and the ministry had the answers available, but chose not to reveal them. This secretive approach is extremely frustrating to applicants and runs counter to the spirit of the *EBR*, which encourages transparency in government. In November 2002, the ECO asked MOE for an opportunity to review its June 2002 IEB investigation report. The ministry agreed. In January 2003, some of the related records became public after a request under the *Freedom of Information and Protection of Privacy Act*. However, a summary of the investigation report itself has not been made public.

How fly ash was handled

The records released publicly in early 2003 show that the applicants were justified in their concerns regarding ash handling and disposal by SWARU's operators. There were irregularities in how the incinerator operators treated test results. Investigators found examples of altered data and examples where records of failed samples were not kept on file. Investigators also found an instance where analytical results of fly ash samples were substituted.

The released records also showed that the patented fly ash stabilization process did not always work properly. As early as 1993, MOE staff wrote to facility operators expressing concerns about high levels of available leachable cadmium in the supposedly stabilized fly ash. But MOE did not continue to monitor this situation. From 1993 onward, MOE staff did not audit the operator's compliance with conditions of the incinerator's C of A, and did not notice until 2000 that required testing results were not submitted. Since MOE did not raise concerns about the missing testing results, both the owners and the operator of the incinerator believed it was not necessary to submit the results to the ministry.

In 1996, Laidlaw Inc. was among companies bidding for renewal of the contract to manage SWARU for the Municipality of Hamilton. Laidlaw stated that its fly ash stabilization patent was a viable process. This, despite the fact that company staff had lab results showing the treated fly ash exceeded leachate criteria on numerous occasions. The stabilization process allowed significant cost savings for the municipality for fly ash disposal. Laidlaw Inc. won the renewed contract to manage SWARU, and Canadian Waste Services assumed the contract when the waste operations of Laidlaw were sold.

It seems likely that during the seven-year period 1994-2000, SWARU operators deposited a number of loads of fly ash at the Glanbrook Municipal Landfill, even though they may not have been properly stabilized and had unacceptably high leachable cadmium levels. However, untreated fly ash was also quite legally deposited at Glanbrook from 1972 until 1990. It would be practically impossible at this point to locate buried fly ash at the landfill site or to distinguish between legally and illegally dumped loads. However, there are lessons to be learned from this case.

ECO Comment

The first lesson is that MOE must pay greater attention to the routine compliance and enforcement work at the ministry's regional offices. MOE regional staff failed to audit compliance with the C of A conditions for SWARU or to inspect the facility's handling of fly ash from 1993 until 2000, even though this aging incinerator was a well-known major source of air emissions and the focus of many complaints from local residents. If MOE had insisted that the facility comply with existing terms and conditions of the C of A, the problems with fly ash handling might not have occurred.

The second point is that MOE needs a strategy, as well as the capacity, to review older Cs of A and ensure they are updated to reflect current standards in environmental protection. The ECO and the Provincial Auditor have both raised this concern in the past several years. Approvals generally do not have expiry or renewal dates, and approvals granted before 1983 included few conditions. The SWARU incinerator, built in 1972, is a case in point. MOE had imposed many amendments to the facility's Cs of A over the years, but until local residents used the *EBR* to request a review, the ministry had not undertaken a comprehensive review of this major emission source. In 2000, MOE acknowledged to the Provincial Auditor that outdated Cs of A are a systemic problem, and committed to improvements through a new Integrated Divisional System. It is unclear what progress MOE has made on this front.

The third point is that MOE needs to become more transparent in its dealings with the public, and needs to encourage permit-holding facilities to take the same approach. If MOE had shared key information with the public earlier, some of the problems at SWARU might have been caught earlier. In 1997, the regional municipality established a formal community liaison committee for SWARU to review the incinerator's operation. But members of this committee were not allowed to review the process for stabilizing the fly ash, and also were not allowed to see the supporting documents that were the basis of MOE's decision in 1992 to permit the stabilizing of fly ash. In 1998, former members of this committee raised concerns about fly ash handling at the SWARU incinerator, and questioned the long-term effects of disposing this waste at municipal landfill sites. But MOE did not pursue the issue until the summer of 2000, after a request for review had been submitted under the *EBR*.

Over the last few years, SWARU's air emissions, noise and odour problems and deteriorating condition were becoming a topic of frequent debate at Hamilton City Council. The municipality had been planning to close the incinerator at the end of 2006, because the facility would have required expensive new pollution controls to meet tougher new Canada-wide Standards for dioxin and furan emissions that will come into force then. But closure plans were greatly accelerated in October 2002, after MOE issued an amended C of A for the facility, setting tougher new terms and conditions for operating the plant. This tougher, updated C of A was the end result of a major review of the facility, which had been precipitated by the May 2000 *EBR* application for review. The ECO commends MOE staff for carrying out this review and for insisting on environmental improvements at the facility. In November 2002, the municipal council voted to close the incinerator permanently in December 2002, rather than spend more funds to upgrade the 30-year-old plant.

This case study highlights why the public rights in the *Environmental Bill of Rights* are important, and shows how Ontario residents can raise questions about approvals that force ministries to think beyond the near and now. (For further details, see the Supplement to this year's annual report). *(For ministry comments, see page 210.)*

Sludge Spreading Sites Exempted from the *EBR*

Municipal sewage sludges are often spread on Ontario farmlands to take advantage of plant nutrients, especially nitrogen and phosphorus, contained in these wastes. But spreading these sludges on farmland is also a form of waste management. Before being spread on land, sewage sludges must be stabilized through anaerobic or aerobic digestion to reduce odours and pathogens. Nevertheless, considerable public interest and concern is focused on the potential for odours and possible contamination of groundwater and surface waters with pathogens and other pollutants.

Land spreading of sewage sludge is regulated by the Ministry of the Environment through certificates of approval (Cs of A) under Regulation 347, RRO 1990, of the *Environmental Protection Act*. The technical term for these instruments is "organic soil conditioning site Certificates of Approval." However, there is no mechanism that allows for formal public consultation on these approvals. They have been exempted from the list of classified instruments under the *Environmental Bill of Rights* since the *EBR* was enacted in 1994. Therefore, they are not posted on the Registry for public comment. Moreover, Ontario residents do not have the right under the *EBR* to request reviews of these certificates of approval, nor can they request investigations if they believe conditions of the certificates of approval have been contravened.

In the summer of 2002, applicants submitted an *EBR* application requesting that MOE review the regulation that exempts all approvals for sewage sludge spreading from the *EBR*.

The applicants raised a number of concerns:

- Sewage sludge may be legally "imported" from other municipalities and applied to land in a host municipality, without that municipality's having any right to be notified or consulted.
- Sewage sludge spreading may affect municipal matters such as land use planning, watershed planning, surface or ground water protection – or other citizen concerns. Therefore, the applicants argued, municipalities should have the right to be notified about sewage sludge disposal.
- Sewage sludge with elevated copper levels might be "imported" and spread in a municipality, without the host municipality's receiving any notification or rights to comment.
- Local residents are very concerned about the lack of notification and consultation prior to sludge spreading. Residents want their municipal council to take a stand on this issue, on behalf of the residents.

MOE denied this request for review, stating that the ministry was already reviewing all policies surrounding sewage sludge management, including notification and consultation requirements. The ministry provided the applicants with a news release and backgrounder dated April 2002, confirming that the Ontario government was accelerating its review of current quality standards and testing requirements for sewage biosolids. The review was to address notification and consultation requirements for municipalities and others that receive nutrient materials for land application. According to the news release, MOE committed to engage all stakeholders in its review. The ministry also assured the applicants that any environmentally significant changes to legislation or to MOE's policies on this matter would be posted on the Environmental Registry for public consultation.

Two initial proposals (both posted on December 2, 2002) were silent on the issue of whether municipalities should receive notice of sewage sludge spreading within their boundaries. The Ministry of Agriculture and Food posted its Draft Nutrient Management Regulations under the *Nutrient Management Act* (RC02E0002). These regulations covered certain agronomic issues relating to the land application of sewage sludge, but not public consultation. MOE also posted a proposal, entitled Stage 2 Regulatory Changes regarding the Proposed Strategy for the Five-Year Phase-Out of the Land Application of Untreated Septage (RA02E0035). Because this proposal dealt with a different waste material, namely, untreated septage, it also did not address the key concern of whether municipalities should receive notice of sewage sludge spreading.

OMAF and MOE staff met with the ECO in January 2003 to discuss proposed regulations under the *Nutrient Management Act*. MOE staff described proposed changes to MOE's land application program for sewage sludges, suggesting the following approach:

- Proponents intending to land-apply sludge would have to consult with intended host municipalities, and submit the results of the consultation to MOE with their request for a C of A for land application.
- Host municipalities would not have the right to refuse sludge application, but would have the right to submit comments during a brief comment period.
- MOE would inspect all proposed sites prior to approval and would notify host municipalities of MOE's decision on the C of A.
- The proponent would be required to notify MOE, the host municipality and neighbouring residents one week before land application.

On April 25, 2003, MOE followed through on this approach. The ministry posted a proposal for a regulation on the Registry (RA03E0017), outlining the above consultation and notification procedures for land application of sewage sludges and other non-agricultural waste. MOE provided a 30-day comment period on this proposal.

Prior to posting this proposal on the Registry for public comment, the ministry consulted on the issue through public meetings held at a number of locations in Ontario, as part of the larger consultation on regulations under the *Nutrient Management Act*. MOE received verbal feedback from stakeholders indicating that municipalities are not satisfied with the approach, and would prefer the right to refuse sludge applications outright. For their part, sewage sludge haulers have concerns with the obligation to notify neighbours in advance of land application, arguing that it would result in disputes and the need for negotiations in many cases.

ECO Comment

The ECO described concerns related to approvals and practices of sewage sludge application in our 2000/2001 annual report (pages 48-56). This is the second time that Ontario residents have requested a review of O.Reg. 681/94 under the *EBR*, which exempts Cs of A for land application of sewage sludge from being posted on the Environmental Registry. The first case is described in the Supplement to our 2001/2002 report (page 210). MOE has denied both requests for review.

The ministry was justified in denying this application for review, since the ministry was already reviewing this issue in conjunction with consultations on the *Nutrient Management Act* and its regulations. MOE reiterated to the applicants that the ministry would review the notification and consultation requirements for municipalities and others that receive sewage, biosolids or paper sludges, and that public consultation would occur through the Registry. The ministry carried through on this commitment.

There is clearly a high degree of public interest in the potential environmental impacts of spreading sewage sludge on farmland. Public confidence in the regulatory framework for this activity would be strengthened if these certificates of approval were prescribed as instruments under the *EBR*. This would provide the general public with rights to comment and the right to request reviews and investigations related to specific instruments. The ECO recommended this approach to OMAF and MOE in February 2002, as part of a more general recommendation to prescribe the *Nutrient Management Act* and its regulations under the *EBR*. The ECO will review MOE's decision on its proposed regulation (RA03E0017) regarding consultation and notification procedures for land application of sewage sludges once it is posted on the Registry. *(For ministry comments, see page 210.)*

Sound-Sorb

In the past three years, a number of gun clubs across southern Ontario have begun to build high berms on their properties to comply with new federal regulations to reduce noise and danger from stray bullets. A hauling company has encouraged gun clubs to build berms using a mixture — called Sound-Sorb — of approximately 30 per cent sand and 70 per cent paper mill sludge. In 1999, the Ministry of the Environment decided that the available exemption provisions under Part V of the *Environmental Protection Act* applied to Sound-Sorb. As a consequence, Sound-Sorb was exempted from waste management regulations – thus, the ministry does not regulate this material nor control how it is placed on land.

The Sound-Sorb berms are typically very large. For example, the berm at the Oshawa Skeet and Gun Club is approximately 90 m long, 20 m wide and 15 m high, equivalent to roughly 200 tractor trailer loads of the material. There are now similar berms in eight locations in southern Ontario.

In December 2001, the ECO received an *EBR* application for review concerning Sound-Sorb. The application requested a review of MOE's policy exempting Sound-Sorb from the waste management regulation, s. 3 of Regulation 347 under the *Environmental Protection Act (EPA)*. The applicants noted that Sound-Sorb is being applied directly to land, without any leachate control. They also stated that the paper mill sludge is not being stabilized or changed in any way by adding sand, and that it continues to undergo decomposition in the high berms. They also noted that tests of liquid at the base of a Sound-Sorb berm carried out for the Durham Region Health Department in 2001 found high levels of both fecal coliform bacteria and *E. coli*. The source of these bacteria remains uncertain. (For additional background on this application for review, see pages 188-194 in the Supplement to this annual report.)

MOE agreed to undertake a review of the issues raised by the applicants. The outcome of the review was confusing, however. Although the ministry confirmed "that the policy regarding the use of Sound-Sorb is applicable," it also noted that technical studies and monitoring are still ongoing, and that some form of site-specific controls in the form of construction protocols for the berms will be required in the future. The ministry also made a commitment to respond to any adverse impacts.

Over a 15-month period, the ministry considered the issues raised by the applicants, and during that same time period, also released detailed studies evaluating the composition of Sound-Sorb at two berm sites. Toward the end of its review of the application, the ministry also initiated three additional long-term studies, which are likely to yield findings in mid- or late 2003:

1. On January 13, 2003, MOE issued a Request For Proposal for a Site Specific Risk Assessment on the Sound-Sorb Berm at the Oshawa Skeet and Gun Club. It is expected that the findings of this report will be presented at a public meeting in mid-September 2003, and that a final report will be completed in early October 2003.

2. On November 15, 2002, the field testing component of a study to evaluate bio-aerosols (such as air-borne fungal spores) was completed at the Oshawa Skeet and Gun Club. The ministry received a draft report on March 17, 2003, and noted that preliminary conclusions are that bio-aerosol releases from this site are expected to be low and of minimal concern. The ministry committed to further air testing at this site and also at the East Elgin site when weather permits.

3. On December 5, 2002, MOE began sampling a set of groundwater monitoring wells: four at the Oshawa Skeet and Gun Club, six at a nearby composting site, and four at a nearby gravel pit where paper fibre sludge was previously stored. The ministry intends to monitor these wells for a period of one year, and has informed the ECO that there will be a sampling regime for each of the four seasons.

The ministry's response to this *EBR* application did not provide any reasons for almost three years of delays before MOE began collecting groundwater monitoring data. Concerned residents and their local Members of Provincial Parliament (MPPs) have been demanding groundwater monitoring since the summer of 2000, and three successive Ministers of the Environment have promised to have groundwater monitoring wells installed at Sound-Sorb sites.

The ECO's review of this application indicates that MOE has mishandled the Sound-Sorb issue repeatedly since 1999, when questions first arose about the status of this material. The ministry's first, and probably most significant, error was to decide that Sound-Sorb was exempt from Regulation 347 of the *EPA* because it is a product rather than a waste.

MOE's Policy on Sound-Sorb

The company that produces Sound-Sorb received approval from Industry Canada in July 1999 to register Sound-Sorb as a trademark. It appears that around this time, MOE received a request to consider Sound-Sorb a product rather than a waste. MOE technical and legal experts advised at the time that the Sound-Sorb material is exempt from Part V of the *Environmental Protection Act* and Regulation 347. Moreover, MOE experts decided that a regulatory change was not required, and that the company could rely on an existing provision in Regulation 347. MOE's policy decision on Sound-Sorb was never posted on the Environmental Registry for public notice and comment.

MOE experts reasoned that the paper mill sludge was municipal waste as defined in Regulation 347, even though the material was produced by an industrial process. Because the paper mill sludge was municipal waste, they determined that the following exemption of Regulation 347 applied to Sound-Sorb:

> ". . . to be wholly utilized at a site in an ongoing agricultural, commercial, manufacturing or industrial process or operation used principally for functions other than waste management if the process or operation does not involve combustion or land application of the waste." (Section 3(2)1(i) of Regulation 347 RRO 1990)

MOE experts further reasoned that the last five words of this exemption "land application of the waste" were not a hindrance to the application of Sound-Sorb to land in the form of berms, because "it is not the paper fibre biosolids but rather the product Sound-Sorb that is in reality being placed on the land." MOE continues to rely on this argument. However, the ECO views this argument as strained, circular and very unconvincing.

There were undoubtedly additional, more pragmatic, reasons and pressures that led MOE to treat Sound-Sorb as a product. A key pressure must have been the overall policy direction to increase waste diversion from landfills, which has been an important goal for the ministry since the early 1990s. This goal was further reinforced and formalized in June 1998 by MOE's proposed new regulation to consolidate and update a wide range of waste management rules.

Another incentive must have been the fact (as noted by MOE in its response to the *EBR* applicants) that Sound-Sorb is composed largely of waste paper fibre sludge produced by recycling Blue Box materials such as newspapers, magazines, office paper, mixed paper and corrugated cardboard. The recycling operations carried out by Atlantic Packaging produce approximately 190,000 tonnes of waste paper fibre sludge annually. Since the success of Ontario's Blue Box program is dependent on markets for its collected materials, and since Atlantic Packaging represents a key market for waste paper, MOE would be reluctant to create obstacles for the smooth operation of this company. Requiring the company to landfill the paper fibre sludge would have increased costs.

It is also very likely that MOE's decision on Sound-Sorb was influenced by recent court cases, which some have interpreted as limiting the ministry's ability to define materials as wastes. In a key case in 1997, Philip Enterprises received a ruling from the Ontario Court, General Division, that chop-line residue purchased by the company for recycling was not a waste, but rather a resource.

MOE decided to adhere to its 1999 decision, even as the construction of large berms of Sound-Sorb at eight locations resulted in mounting complaints and concerns from local residents, municipalities, MPPs and environmental groups. Members of the public have argued that common sense dictates that Sound-Sorb should be considered a waste mixed with sand, rather than as a product. They note, for example, that most products are sold for a price, while Sound-Sorb is provided to gun-clubs free of charge. As well, Sound-Sorb consists mostly of waste paper fibre, which MOE agrees is a processed organic waste. The waste paper fibre is not stabilized by the addition of sand; on the contrary, MOE reports variously describe Sound-Sorb as putrescent, as material that heats up and composts, and as material subject to vigorous microbial activity. MOE also noted in one of the studies that the high *E. coli* levels in fresh waste paper fibre sludge make it important to monitor groundwater and surface water draining from one of the Sound-Sorb berms.

The ECO agrees with the applicants that there is a very large and troubling discrepancy between MOE's regulatory treatment of land application of paper sludge, and the ministry's treatment of the very same material once it is mixed with sand. In March 1999, the same year that MOE determined that Sound-Sorb was exempt from waste management regulatory controls, MOE also issued a two-year certificate of approval to Atlantic Packaging to apply paper sludge on agricultural land. MOE issued a media backgrounder to describe this approval and emphasized that "stringent environmental conditions" were attached. Among other things, MOE required Atlantic Packaging to complete a study showing whether the application of paper sludge is beneficial to soil and crops. The company was also required to reduce the length of time that sludge was stored on farm fields before application, and was not allowed to apply sludge during the winter.

The many public concerns about Sound-Sorb have forced MOE to dedicate significant staff resources to studying, monitoring and reporting on this waste material, not to mention responding to voluminous correspondence from a wide range of concerned residents, municipalities and MPPs. Had the ministry determined that Sound-Sorb was a waste at the outset, such studies, monitoring programs and public consultation would have been the responsibility of the waste generator. Unfortunately, MOE's decision to exempt Sound-Sorb from Regulation 347 did not have the effect of alleviating MOE of regulatory responsibility. On the contrary, MOE was gradually forced to take on many of the responsibilities that would normally fall to the waste generator.

MOE's Capacity to Revise Policy

This application illustrates how very difficult it can be for MOE to reconsider or reverse a policy it has taken on a technical issue. In a portfolio where new types of industries, manufacturing processes, emissions and wastes are constantly emerging and where new science findings are commonplace, this ministry needs the institutional capacity to rethink its position periodically and to shift to a new course. MOE does from time to time reconsider its policies on waste issues, but the process often appears to be unduly time-consuming and tortuous, taxing the energies of both MOE staff and stakeholders. For example, in this reporting period, MOE is phasing out hospital incinerators (see pages 85-88), a policy direction that was first proposed in the early 1990s. MOE is also phasing out the land application of untreated septage (see pages 204-207 in the Supplement to this report), which has been a long-standing practice in Ontario. As well, in October 2002, MOE ordered an end to using pulp mill waste liquor as a dust suppressant on rural roads, after a nine-year public debate.

The ECO suggests that MOE needs to be asking broader questions in the evaluation of such materials, and needs to consider a wider range of policy goals. The goal to increase diversion of waste from landfill is certainly a worthy one, as is the goal to support and encourage down-stream markets for Blue Box materials. These goals may have had some bearing on MOE's 1999 decision to treat Sound-Sorb as a product. But there are other questions that also need to be asked. For example, is the regulation of a given material fair and consistent with the regulation of other similar materials? Is the principle of producer responsibility being upheld? Are the physical properties or the sheer volumes of the material such that they might impact long-term future uses of the land or the ecological value of nearby lands? If so, what are the implications for siting or for mitigation? Is the ministry applying a precautionary approach and an ecosystem approach in its decision-making, as proposed in the ministry's own Statement of Environmental Values? There is no doubt that many of these questions will be challenging and contentious.

The ECO suggests further that MOE, as the agency responsible for waste management regulation in Ontario, needs to take the lead in developing a workable regulatory framework for industrial wastes such as paper mill sludges. It appears that MOE has stepped back from this responsibility. In 1998, MOE had proposed an overhaul, and had described the need for reform: "There is currently a lack of consistency between technical standards for waste management facilities, approval requirements and potential environmental risk. Therefore, the ministry intends to proceed with the development of four classes of approvals for waste management facilities based on the environmental risk posed." But in August 2002, MOE made public through the Environmental Registry that this 1998 proposal to reform its waste management regulations would not proceed.

The ECO encourages MOE to think beyond the near and now on this issue. The development of an overarching waste management framework may be difficult and time-consuming, but the alternative is to continue to expend the ministry's limited resources on thorny, case-by-case problems, as this *EBR* application has clearly illustrated.

(For ministry comments, see pages 210-211.)

Water Pollution at Ashbridges Bay

Several sewers discharge into Ashbridges Bay on Toronto's waterfront, on Lake Ontario. These sewers are combined sewer systems (CSOs), meaning that during storms or snow melts they discharge a mixture of raw sewage and storm water into Ashbridges Bay, which is close to a popular beach area in Toronto's east end. In April 2002, a multi-agency government review described the uncontrolled flow of polluted stormwater and combined sewer overflows as the most significant cause of degradation of Toronto's waterfront. Also, in April 2002, the Sierra Legal Defence Fund (SLDF) submitted an *EBR* application for investigation to the Ministry of the Environment on behalf of three applicants, alleging that the City of Toronto was contravening two laws by discharging contaminated sewage at this location. (For additional background on this application for investigation, see pages 249-254 in the Supplement to this annual report.)

SLDF issued a news release publicizing its application, describing the evidence submitted. The applicants collected water samples at combined sewer outfalls during rainfall events on two occasions in November and December of 2001 and submitted them for sampling to an independent laboratory. The laboratory analysis revealed very high levels of *E. coli* – up to 5,200 times the Provincial Water Quality Objective. The applicants alleged that the discharge of these waterborne bacterial contaminants was contrary to section 14 of the *Environmental Protection Act* and also contrary to section 30 of the *Ontario Water Resources Act.*

The applicants also noted that the observed bacterial contamination is a well-documented chronic problem. They submitted City of Toronto reports and monitoring data dating back to 1986, showing that *E. coli* counts in the thousands (per 100 ml) are commonplace in Ashbridges Bay. They argued that the City of Toronto has not been working to bring this situation into compliance, but, on the contrary, has been approving a significant number of new commercial and residential developments in the sewer-shed, thus placing further pressure on the sewer systems.

On June 28, 2002, the Ministry of the Environment advised the applicants that the ministry would be investigating the allegations. On September 26, 2002, MOE informed the applicants that MOE's Toronto District Office staff had reviewed the allegations. MOE also provided the applicants with a brief report, but the report focused on questions only tangentially connected to the allegations, such as the historical approval mechanisms for Toronto sewers. Ministry staff had not found any evidence that the City of Toronto had built or modified CSOs or connected sewers without approval. MOE had also forwarded the allegations to its own Investigations and Enforcement Branch (IEB) for further assessment and investigation, while the Toronto District Office would continue to monitor activities in Ashbridges Bay area. The lawyer for the applicants wrote back that MOE's investigation was inadequate, partly because it did not attempt to verify or quantify the pollutants being discharged, and did not attempt to identify interim solutions.

On December 2, 2002, MOE's Central Region Office wrote to the applicants, saying the ministry has not disputed the applicants' information about the water quality in the Ashbridges Bay channel on the day sampled. MOE's letter also noted that CSOs at the site contribute to poor water clarity, high concentrations of nutrients and bacteria, elevated concentrations of metals and organic contaminants, increased water temperature and accumulation of trash. MOE also noted that the reduction of excess flows was one of the goals of an ongoing environmental assessment process for the Ashbridges Bay Sewage Treatment Plant.

On February 10, 2003, MOE's Investigation and Enforcement Branch wrote to the applicants, saying that the IEB would not assign an investigator to this matter, because "there is not enough evidence, or likelihood of obtaining evidence to warrant assigning this matter to be investigated." MOE included an IEB report that explained that the applicants had obtained water samples from the edge of sewer outfalls, instead of collecting the samples right inside the sewer system. According to MOE, it was critical to have samples collected right within the sewer system, for a prosecution to proceed. It was also essential to observe the inside of the sewer on the sampling date to determine whether an overflow was occurring at the time. The IEB report also noted that, based on available information, there was a reasonable prospect that a defence of due diligence — a legal term meaning the exercise of reasonable and prudent care — would stand.

In a March 12, 2003 letter to the ECO, the applicants outlined their concerns with the ministry's investigation. They noted that MOE's approach in this case set a bad precedent for the *EBR's* application for investigation mechanism in general. They stated that "from the perspective of the meaningful operation of the *EBR*, it is deeply disturbing that the Ministry of theEnvironment would essentially require citizen applicants to meet the standard required internally by the IEB for prosecution. Such an approach all but excludes the general public from the Application for Investigation process. No ordinary citizen can be expected to prepare a ready-for court prosecution brief. Rather the process is intended to initiate the Ministry's fact-gathering process. In this case, that process has been woefully inadequate."

ECO Comment

The ministry's investigation in this case was inadequate and contradictory. On the one hand, the ministry acknowledged that the water quality problems at Ashbridges Bay have been long-standing. Since MOE did not turn down the initial request for an investigation, the ministry clearly did not consider the application frivolous, vexatious, or unlikely to cause environmental harm. On the other hand, MOE decided that the samples submitted by the applicants were not adequate for pursuing a prosecution, and decided not to carry out its own testing or to investigate the matter any further. In the end, MOE's "investigation" amounted to a paper review of ministry files. None of the usual investigation techniques were employed.

The ministry's refusal to investigate this matter properly frustrates the intent of the *EBR*, and the applicants in this case are justifiably concerned that the case sets a bad precedent for the application for investigation process. The applicants provided evidence to the best of their legal and technical ability and requested that the ministry investigate further. It would be illegal and extremely dangerous for Ontario residents to attempt to collect water samples from within a sewer system. The ministry, in contrast, has both the legal mandate and the technical ability to collect such samples. Since the sewer discharge is an acknowledged ongoing and long-standing problem, the ministry could have waited for another rainfall event to collect legal samples from within the sewer system. The ministry could then initiate an IEB investigation. This would have been a logical next step for the ministry to take, and would have conformed with the ministry's approach on two other recent *EBR* investigations described in this annual report. In both those cases, MOE sent out staff to investigate the sites first-hand, and then followed up with abatement or enforcement action. (See Cook's Mill, pages 121-124, about an alleged discharge of excessive noise, and also also pages 267-271 of Supplement to this report on an alleged illegal waste disposal site.)

In this sewer discharge case, the ministry's investigator noted "a reasonable prospect" that the City of Toronto would have a defence of due diligence, based on preliminary information provided to the investigator. The question of the city's due diligence – the exercise of reasonable and prudent care – would likely have become a key issue if the ministry had carried out a full investigation, with the intent of prosecuting the city. Unfortunately, MOE chose not to address this complex question directly.

Evaluating the city's defence of due diligence would certainly have been a major undertaking for MOE, since it would probably have required a review of the history of several complex, contentious, and inter-related initiatives: the Ashbridges Bay Sewage Treatment Plant Environmental Assessment (under way since 1998), and the City of Toronto's progress on a Wet Weather Flow Management Master Plan. This last plan has been in development since 1997, and is expected to have a capital cost of approximately $1 billion over 25 years. It includes plans to capture and treat combined sewer overflows and also to encourage infiltration of rainwater into the soil where it falls.

MOE appears to be relying heavily on the environmental assessment process to influence water quality improvements along Toronto's eastern waterfront. However, under this process, which is driven by the city, MOE has a limited ability to set the agenda and no ability to drive the timetable for environmental improvements. Although MOE could take a more assertive regulatory role by issuing orders requiring improvements to the Ashbridges Bay Sewage Treatment Plant and sewer systems, this approach does not appear to be favoured by the ministry.

Evidence at the Walkerton Inquiry demonstrated MOE's historic reluctance to prosecute municipalities, especially in relation to communal drinking water. The ministry has also tended to prefer a voluntary abatement approach when dealing with non-compliance by municipal sewage treatment plants (see STP Effluent Quality, pages 35-49). In keeping with this pattern, MOE's dealings with the City of Toronto's Ashbridges Bay Sewage Treatment Plant and the city's long-standing CSO issues (as well as this *EBR* investigation) have all emphasized voluntary measures rather than mandatory requirements or enforcement.

In contrast to its handling of sewer deficiencies at the City of Toronto, MOE does issue mandatory orders to some municipal sewage treatment plants. For example, in April 2003, MOE issued an order requiring the municipality of Port Hope to upgrade its sewage treatment plant. The ministry's inspection report noted that the facility bypassed untreated effluent 11 times in the year 2002, and stated that "it is the Ministry's position that the frequency and continuation of sewage bypasses . . . are unacceptable." Until the upgrades are completed around the end of 2005, Port Hope will be able to add only 400 new units to its sewer system.

It is quite possible that MOE's staff and resources may be challenged and stretched by enforcement actions or mandatory Orders issued to large and complex proponents such as the City of Toronto. But MOE is the key regulating agency on water quality issues in Ontario. The ministry has a responsibility to maintain a viable abatement and enforcement capability, and should apply this capability equitably to large and small proponents. *(For ministry comments, see page 211.)*

Recommendation 10

The ECO recommends that the Ministry of the Environment ensure that the full range of the ministry's existing compliance and enforcement tools are applied consistently to large and small municipalities and that wastewater collection and treatment infrastructure of all municipalities be brought up to modern environmental standards in a timely manner.

Incident at the Safety-Kleen Incinerator

An application for investigation under the *EBR* was submitted to the Ministry of the Environment requesting an investigation into a chemical vapour release on September 20, 2001, at the hazardous waste incinerator in Corunna, Ontario, then owned by Safety-Kleen. The applicants had heard that a work refusal by Safety-Kleen staff occurred after a seam ruptured in a holding tank filled with a mixture of chemicals as it was being vacuumed out. Employees at the plant suffered nausea and headaches and six of them were sent to hospital. The applicants asked MOE to investigate whether the incident was a contravention of section 14(1) of the *Environmental Protection Act (EPA)*, which prohibits the discharge of a contaminant into the natural environment that causes or is likely to cause an adverse effect.

The applicants also complained that nearby residents and the larger community were not informed of the release and found out about it only weeks later when it was reported in the local newspaper. Because they believe that the operation of the incinerator poses a danger to the environment and the health and safety of people living around or working at the site, the applicants believe the incinerator should be shut down.

In denying the request for investigation, the ministry referred to the observations and actions of the on-site environmental inspector, who was present during the incident. According to MOE, the incident occurred when a vacuum truck operated by a contractor was brought in to remove liquid hazardous wastes from a large storage tank scheduled for clean-out and repair. The on-site environmental inspector said the vacuum truck operated without effective vapour control measures, resulting in an uncontrolled release of vapours.

MOE said the inspector observed the strong odours and equipment malfunction and informed the company of the need to take action to shut down the vacuum truck operation and contain the odours. The inspector had also noted odours north of the site earlier in the day, but did not specifically indicate a connection between the odours off-site and the emission of odours from the activities associated with the clean-out of the holding tank.

The ministry said that because of the complaints received from workers, an inspector from Human Resources Development Canada (HRDC), the federal department responsible for enforcing the Canada Labour Code, was on site the afternoon of the incident. (Actually, the inspector was in contact by phone on the day of the incident, but was not on-site until the following day.) An Order was later issued under the Canada Labour Code.

MOE said that neither the ministry nor the company received any odour complaints from the public regarding off-site impact, and thus concluded that there were no off-site environmental impacts as a result of the emission. MOE decided that the impact was limited to workers on-site, that the matter was appropriately dealt with by Human Resources Development Canada under the Canada Labour Code, and that no further investigation was necessary under the *EPA*.

The ministry did not respond to the applicants' more general concerns about the emission standards or the safety of the facility.

ECO Comment

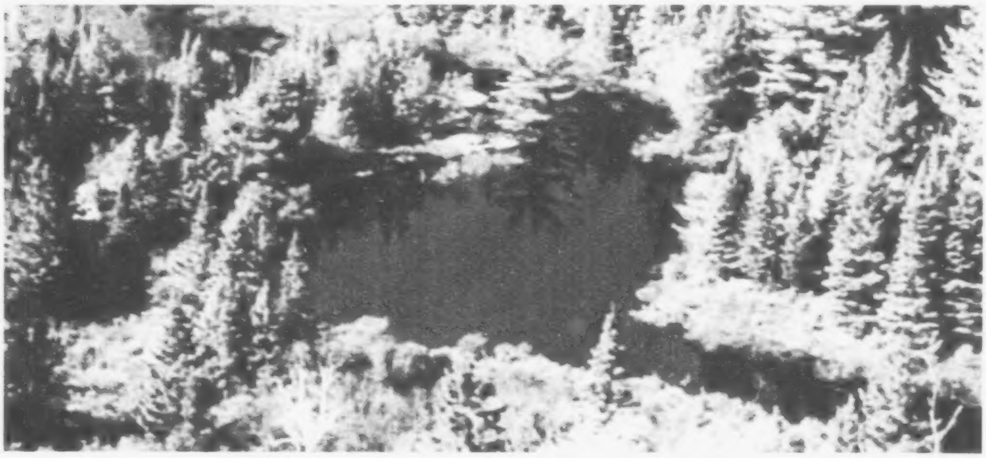
Although MOE put forward a number of reasons for denying this application for investigation, the ECO's review has not found them to be convincing. MOE's reasons for denying the application included the following: the incident was caused by the actions of a contractor; the incident was a one-time-only event; there were no off-site impacts; and a federal agency was appropriately dealing with the incident. The ECO considered each of these points.

MOE explained that on the day of the incident, September 20, 2001, a contractor's vacuum truck was removing liquid waste from tank 15, and that air discharged from the truck's vacuum system caused strong odours on the Safety-Kleen property.

MOE described the incident to the applicants as a one-time-only event. However, the federal Human Resources Development Canada report and file on its investigation provides an explanation of the incident that differs from MOE's. The HRDC report found evidence of ongoing problems with vapour releases from the tank farm, and made no mention of the vacuum truck as a factor. The federal investigator's report concluded that tank 15 had a split along a weld seam that permitted gaseous vapours to escape, constituting a danger to employees. The split had been discovered in December 2000, but the company decided to postpone tank clean-out and repair until the following winter in order to focus on demolition of another obsolete tank. The split of tank 15 was patched with fiberglass frequently from January to September 2001, but the repair failed repeatedly, apparently because of pressurization within the tank. On the day of the federal investigator's site visit, September 21, 2001, the company was directed under the Canada Labour Code not to use or operate the tank until it had been appropriately emptied and repaired.

The HRDC investigation discovered numerous related odour complaints from Safety-Kleen employees to management, dating from January 2001 and increasing in frequency during July, August and September of 2001. The files also show continuing odour complaints, formally lodged with the company and forwarded to HRDC, related to the tank 15 clean-out as late as January 2002, contrary to MOE's assurance that "the clean-out of Tank 15 has since been completed with no further complaints."

Because there is an on-site inspector in place, MOE should have been aware of chronic problems at this site, and have been monitoring whether they pose any contraventions of the facility's certificate of approval (C of A) or section 14 of the *EPA*, or whether they constitute a spill under the *EPA*. In response to a follow-up question from the ECO, MOE stated that there is no requirement in the facility's C of A requiring public notification of an incident of this nature. However, the descriptions provided would indicate that the incident was in fact a spill under the *EPA*, because a spill includes a discharge of gas into the natural environment from a structure, vehicle or other container that is abnormal in quality or quantity and causes or is likely to cause an adverse effect. As such, the incident should have required notification to the municipality and to MOE, as well as the duty to act to prevent and eliminate the adverse effect.



MOE's conclusion that there were no off-site impacts from this incident is irrelevant. Property boundaries and the absence of public complaints are not relevant to such considerations. The requirement for an offence under section 14 of the *EPA* is that there be a discharge into the natural environment (the air) that caused an adverse effect. In this case, the adverse effect was apparently "harm or material discomfort" to the persons present. The facts as presented support the conclusion that there was such an occurrence.

The on-site inspector is supposed to bring any issues of non-compliance to the attention of MOE's Sarnia District Supervisor for appropriate follow-up. Notification can be made by means of an immediate phone call, but at a minimum, includes a daily report of any unusual occurrence and actions taken. The ECO asked MOE whether ministry staff investigated or completed an occurrence report in addition to the on-site inspector's report, and if so, requested a copy. MOE confirmed that ministry staff did not document the incident in the ministry's computerized occurrence reporting system or carry out any follow-up. It is noteworthy that the incident was not identified as a spill under Part X of the *EPA* nor as a possible violation of section 14 of the *EPA*.

The inspector-MOE relationship is currently undergoing a change. Until January 2003, the on-site inspector at this facility was not an MOE employee. Then, until the end of June 2003, the on-site investigator was an MOE employee – an Environmental Officer. As of July 2003, MOE is planning to hire a new inspector, who, the ministry says, will obtain Provincial Officer designation. This means that in the future the on-site inspector will be able to write tickets and issue compliance Orders instead of having to refer non-compliance issues to the local MOE office.

MOE determined that no further investigation was necessary under the *EPA* since the matter was appropriately dealt with by Human Resources Development Canada under the Canada Labour Code. However, the *EPA* does not relieve MOE of its enforcement responsibilities in cases where a federal agency takes enforcement action. Although an order was issued under the Canada Labour Code to address occupational health issues, the MOE retains the authority and responsibility to protect the environment.

A Court of Appeals decision from March 2000 dealt with a remarkably similar event. In that case, a discharge of chlorine gas at a Dow Chemical plant in Sarnia caused one employee to sustain injuries. The court's ruling touched on many of the issues raised in this application for investigation. The judge in that case determined that section 14 of the *EPA* applies even when the discharge of a contaminant into the natural environment gives rise to an adverse effect that is limited to a worker in the workplace. The judge did not accept the on-site/off-site distinction proposed by the defendant. Furthermore, the judge determined that while the situation was covered by the *Occupational Health and Safety Act*, also a provincial law, the *EPA* still applies, stating that "... in my view, the purposes of the *EPA* are important and do not permit an interpretation that excludes the Act from operating at work sites." The defendant was convicted of discharging a contaminant into the natural environment and failing to report such discharge under the *EPA*, and was fined $8,000. MOE laid the charges for this incident, which occurred in 1991. In the intervening years, the ministry appears to have changed its approach to enforcing the *EPA*.

MOE provided poor customer service in the handling of this application for investigation. The ministry's response to the applicants was delayed by almost three months due to the OPSEU labour disruption, but the ministry failed to provide a letter or phone call to inform the applicants of the status of their application, requiring repeated inquiries by the applicants and the ECO. The ministry's response to the applicants did not include a contact person's telephone number or an offer to respond to questions. *(For ministry comments, see page 211.)*

Part 6:

Appeals, Lawsuits and Whistleblowers

Ontarians have the right to comment on government proposals, ask for a review of current laws, or request an investigation if they think someone is breaking a significant environmental law. But they also have other opportunities for using the *Environmental Bill of Rights*. They include:

- The right to request appeals of certain ministry decisions.
- The right to sue for damages for direct economic or personal loss because of a public nuisance that has harmed the environment.
- The right to sue if someone is breaking, or is about to break, an environmental law that has caused, or will cause, harm to a public resource.
- The right to employee protection against reprisals for reporting environmental violations in the workplace and for using the rights available to them under the *EBR*.

Appeals

The *EBR* gives Ontarians the right to apply for leave to appeal ministry decisions to issue certain instruments, such as the permits, licences or certificates of approval granted to companies or individuals. The person seeking leave to appeal must apply to the proper appeal body, such as the Environmental Review Tribunal (ERT), within 15 days of the decision's being posted on the Environmental Registry. They must show they have an "interest" in the decision, that no "reasonable" person could have made the decision, and that it could result in significant harm to the environment.

During this past ECO reporting period, concerned residents and environmental groups filed several leave to appeal applications on a range of approvals and Orders issued by the Ministry of the Environment. They include permits to take water (PTTWs), certificates of approval and Orders for remedial work made by MOE. Discussion of two of these leave to appeal applications is set out below. (Further details on these applications are provided in the chart on leave to appeal applications found in Section 7 in the Supplement to this report.)

Status of Appeals

During the reporting period eight new applications for leave to appeal were initiated, two of which were granted by the ERT. Two applications for leave to appeal were dismissed because they were received after the 15-day application period. The other applications for leave to appeal were denied because the ERT determined that the applicants did not meet the test for seeking leave to appeal.

Leave to Appeal Application Results (as of March 31, 2003)

Application dismissed (out of time)	2
Leave Granted	2
Leave Denied	2
Leave Applications Pending	2

The two pending leave to appeal applications were both denied following the end of the 2002/2003 ECO reporting period.

Ministry of the Environment: Instruments

Seventeen "instrument holder" notices of appeal for MOE instruments were posted on the Environmental Registry during the reporting period. The *EBR* requires the ECO to post notices of these appeals, which are launched by companies or individuals who were denied an approval or were unsatisfied with its terms and conditions. The notices alert members of the public, who may then decide to become involved with such an appeal.

Ministry of Municipal Affairs and Housing: Instruments

During the reporting period the ECO posted four notices of appeal for MAH instruments on the Registry. Residents, companies, or municipalities launched these appeals in relation to decisions made by MAH under the *Planning Act* to approve a municipality's Official Plan, an Official Plan amendment, and other approvals in areas of Ontario where no Official Plan is in place. It should be noted that there are hundreds of appeals to the Ontario Municipal Board (OMB) every year regarding Official Plans, but under the *Planning Act* only a small number of approvals require direct approval by the Minister of Municipal Affairs and Housing. It is only these approvals that are prescribed as instruments under the *EBR* and for which notices of appeal are placed on the Registry.

Ministries of Natural Resources and Northern Development and Mines: Instruments

There were no instrument holder appeals or leave to appeal applications with respect to prescribed MNR and MNDM instruments in 2002/2003.

Inco – Port Colborne

On April 15, 2002, the ECO received notice of an application for leave to appeal from a group of residents in Port Colborne, Ontario. (See also page 171 below regarding a class action lawsuit against Inco.) These residents sought leave to appeal MOE's decision to issue an Order for remedial work to Inco Limited at its Port Colborne base metal refinery. Residents wanted the company to be held to stricter standards in cleaning the soil than those specified in the ministry's Order. Operation of this facility from 1918 to 1984 resulted in off-site concentrations of nickel, copper and cobalt that exceed MOE's soil remediation criteria. The eight grounds for seeking leave included the following: the Order exceeded MOE's own absolute maximum guideline for nickel contamination in soil of 7,100 ppm; it allowed excessive cancer risks contrary to MOE's written policy of not permitting cancer risks greater than one in one million; and it allowed contamination to exceed levels that were eight times greater than those already observed at the location and that were acknowledged by MOE to have significantly harmed the natural environment in Port Colborne.

The ERT granted the leave to appeal application on July 11, 2002. The ERT found that the applicants had shown good reason to believe that the Director's decision was unreasonable, and that there was a possibility of substantial environmental harm. The ERT granted leave on the basis of the first ground submitted by the applicants: the Director had argued that his discretion should not be fettered by automatically adhering to non-binding, generic guidelines numbers, but the ERT held that the onus was on the Director to show valid reasons for departing from such guidelines. The guideline in question established an "absolute upper maximum" concentration level, and the Tribunal held that the use of that term reduced the degree of discretion available to the Director and that MOE did not show sufficient justification to depart from this standard. Having granted leave to appeal on this first ground, the ERT decided that it did not need to adjudicate on the other grounds submitted by the applicants.

The applicants sought judicial review at the Ontario Superior Court of Justice – Divisional Court (Divisional Court) of the ERT's decision to grant leave to appeal based on only one ground. The applicants took the position that once an applicant has met the stringent leave test in respect of one issue, any other ground of appeal may be added that does not meet the test. The court rejected the applicants' position and upheld the ERT's decision, dismissing the application for judicial review on the basis that the Tribunal's decision was reasonable. In the meantime, the ERT had clarified that all but the second and third grounds raised by the applicants would be considered as part of the appeal.

As of June 2003, the ERT had not yet issued a decision on the applicants' appeal. The hearing was scheduled to continue during the fall of 2003.

McCarthy Quarry

In October 2002, the ECO received notice of three applications for leave to appeal MOE's decision to issue a PTTW to dewater a proposed quarry in Simcoe County. The applicants' various grounds for seeking leave included the following: the PTTW application contained conflicting estimates of the quarry's influence on the groundwater; the model submitted to the Director to estimate drawdown was based on four inaccuracies that underestimated the drawdown radius; and there was no consideration of the potential impact on significant surface water features such as the impact on springs, wetlands, or the Trent Canal.

On January 8, 2003, the ERT granted the leave to appeal applications of two of the applicants on several grounds, including the finding that the Director's opinion "that the taking of water from the quarry would result in a drawdown of the water table in an area limited to the immediate surroundings of the site" was too conservative an interpretation of the data and modeling. The ERT also held that the proposed quarry is located in a recharge area, and that the vulnerability of the drilled wells to sulphurous and salty water emphasized the potential for impacts on water quality as well as quantity. The ERT denied the other leave to appeal application, deciding that this applicant had submitted insufficient evidence. The ERT will now hear an appeal of this PTTW. The hearing in this matter has been scheduled for October 2003.

Marshfield Woods Update

In our 2000/2001 annual report, the ECO reviewed a decision by MAH to deny approval of a proposed golf course in an important natural area in Essex County – the Marshfield Woods. A proposed Official Plan Amendment (OPA) would have redesignated approximately 79 hectares of land from "Agricultural" to a new designation called "Natural Environment/Golf Course," to permit the development of a golf course. The Council of the Town of Essex had adopted the proposed OPA in November 2000, and then applied to MAH for approval.

After MAH refused to approve the OPA, the developer of the golf course appealed its decision to the Ontario Municipal Board. On December 30, 2002, the OMB dismissed the developer's appeal, denying approval of the proposed OPA. Among its various reasons, the OMB determined that the proponent appealed after MNR had identified the land in question as a provincially significant wetland, so that the Provincial Policy Statement (PPS) as it pertains to natural heritage features applied. According to the OMB, having regard to the PPS in this case meant that the natural heritage policies should be applied fairly to the application for development approval.

The OMB further held that MNR's designation of the subject land as a provincially significant wetland had been made fairly, in accordance with the Ontario Wetland Evaluation System. The OMB rejected the developer's assertion that the wetland designation amounted to taking lands for a public open space without compensation and an unreasonable down-zoning, since the developer did not have the right to a golf course at the time of purchase, no public access was being proposed by MNR, and there was a compelling public interest justification for down-zoning.

The OMB denied the proponent's request for a reconsideration of its decision. In June 2003, the proponent announced it was seeking leave to appeal the OMB's decision to the Divisional Court.

Tay River Update

Last year the ECO reported on the ERT's February 2002 decision on a two-phased permit to take water issued to OMYA (Canada Inc.) to take water from the Tay River in eastern Ontario. The ERT had granted several individuals and groups leave to appeal the PTTW. The first phase of the permit allowed for a taking of a maximum of 1,483 cubic metres of water a day until 2004. The second phase allowed for a maximum of 4,500 cubic metres a day until 2010.

The final decision of the ERT was to grant the first phase of the PTTW. However, the Tribunal was not satisfied that MOE had undertaken sufficient evaluation to ensure that the Tay River watershed would not be harmed by the taking of 4,500 cubic metres per day, the amount granted initially in the PTTW for water taking from 2004 to 2010. The Tribunal decided that OMYA would be required to submit a new application for a PTTW under the *Ontario Water Resources Act* for the second phase of the PTTW.

In March 2002, OMYA appealed the ERT's decision to the Minister of the Environment. On February 14, 2003, the minister released his decision and partially overruled the ERT's decision. The minister permitted the taking of up to 1,483 cubic metres per day prior to January 1, 2004, and a maximum of 4,500 cubic metres per day on or after January 1, 2004. The minister also amended conditions related to annual reporting and public meetings. The PTTW, as issued by the minister, will expire on January 1, 2010.

Public Nuisance Cases

Prior to 1994, when the *EBR* was brought into force, claims for public nuisances had to be brought by the Attorney General or with leave of the Attorney General. Under s. 103 of the *EBR*, someone who has suffered direct economic loss or personal injury as a result of a public nuisance can bring forward a claim and no longer needs the approval of the Attorney General. No new cases including public nuisance as a cause of action came to the ECO's attention during the reporting period, although several cases continue to move through the courts.

In a public nuisance action related to the Port Colborne Inco facility noted above, *Pearson v. Inco Limited et al.*, the plaintiff launched a class action, alleging that Inco had discharged hazardous contaminants into the natural environment, including the air, water and soil of Port Colborne. (See the ECO's 2000/2001 annual report for background on this class action lawsuit, page 150.) On July 15, 2002, the Ontario Superior Court of Justice refused to grant the plaintiff's request for certification on the grounds that: the plaintiff failed to disclose a reasonable cause of action against the Region, the City or the Crown; there was no identifiable class; and a class proceeding was not the preferable procedure for resolving the issues found to be common among the class members. The plaintiff and class members appealed this decision to the Divisional Court and a hearing was held in June 2003, but the court did not make a judgment on the matter at that time.

On September 9, 2002, the Superior Court judge who had dismissed the initial request for certification held the plaintiff liable for costs in relation to this legal proceeding. The plaintiff had argued that, to ensure access to justice, costs should not be awarded against a representative plaintiff who is unsuccessful in having a class action certified, unless it was not reasonable to pursue the action. The court, however, ruled that the normal rule that costs will follow the event should be applied in class proceedings unless there are cogent reasons to depart from the rule. In this case, the court found no reason not to award costs. This precedent may have a chilling effect on representative plaintiffs who wish to initiate class actions.

The Right to Sue for Harm to a Public Resource

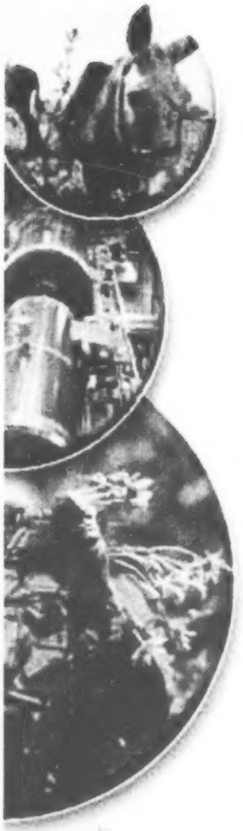
The *EBR* gives Ontarians the right to sue if someone is violating, or is about to violate, an environmentally significant Act, regulation or instrument, and has harmed, or will harm, a public resource. To date, the only court action brought under the harm to a public resource provisions of the *EBR* for which notice has been provided to the ECO is the proceeding started in 1998 by the Braeker family against the Ministry of the Environment and Max Karge, an owner of an illegal tire dump. Unfortunately, civil actions often take a long time to be resolved if there is no settlement, and the Braeker action is ongoing. The ECO will continue to monitor this case, and will report on its ultimate conclusion.

Whistleblower Rights

The *EBR* protects employees from reprisals by employers if they report unsafe environmental practices of their employers or otherwise use their rights under the *EBR*. There were no whistleblower cases in this reporting period. Since the *EBR* was established, no complainants to the Ontario Labour Relations Board have invoked this right.

Part 7:

Ministry Progress



Ministry Responses to 2001/2002 ECO Recommendations

The ECO follows up annually on the progress made by the prescribed ministries in implementing recommendations made in previous years. ECO has requested progress reports on selected recommendations from the list of 18 recommendations made in last year's annual report, and on other initiatives taken by the ministries. In some cases ministries voluntarily submit updates, and these are summarized in this section.

There has been a significant level of activity this year by the ministries in implementing past ECO recommendations.

MOHLTC Initiatives on Drinking Water

In previous annual reports, the ECO has noted that ministries should develop procedures to ensure that residents relying on small private water systems have access to clean, safe water supplies. In response to similar recommendations from the Walkerton Inquiry and concerns expressed at Inquiry hearings, the Ministry of Health and Long-Term Care, together with representatives from the Ministries of the Environment and Agriculture and Food, established an Inter-Ministry Private Water Systems Committee. In 2002, this committee began to develop an education and outreach campaign on how Ontarians can protect, maintain and remediate their private water systems. MOHLTC advised the ECO that the educational material will begin to be distributed in summer 2003 via all 37 local health units.

MOHLTC also reported that it has updated its Protocol for the Issuance of a Boil Water or Drinking Water Advisory, and that the changes were circulated to all Health Units and stakeholders for final comment. This version reflects the new MOE Drinking Water Systems Regulation made under the *Safe Drinking Water Act*. The finalized version is expected to be released in summer 2003.

The Safe Water Mandatory Program has undergone a multi-stakeholder technical review. This revision is intended to clarify the roles and responsibilities concerning water sampling and to eliminate any confusion that currently exists concerning the role of public health inspectors in that role. Details are expected to be finalized in summer 2003, and will be posted on the Environmental Registry at that time.

Lake Trout Management

Last year the ECO reported on threats to the sustainability of lake trout in inland lakes in Ontario and commented on the need for formal fishery management plans and more monitoring of the lakes that support them. The Ministry of Natural Resources reports that information on the status of lake trout in northeastern Ontario is currently being collected, and expects the studies to be completed in fall 2004. The ministry is also working on a "state of the resource" pilot project to monitor the status of lake trout and walleye populations. A discussion paper outlining options for a provincial level monitoring program is expected by August 2003, and public consultation will follow.

Also last year, the ECO indicated that better guidance is needed for municipalities to assist them with lakeshore capacity planning, particularly where lake trout lakes are potentially impacted. Toward this end, the Ministries of Municipal Affairs and Housing, Natural Resources and Environment report that a manual, *Lakeshore Capacity Assessment – Protecting Water Quality in Inland Lakes*, is nearing publication. The manual will include a new criterion for dissolved oxygen for the protection of lake trout habitat, a proposed new Provincial Water Quality Objective for phosphorus, and a Lakeshore Capacity Model and guide. The three ministries are currently reviewing the guidelines and intend to post them for broader public review and comment on the Environmental Registry later in 2003. The ECO commends the ministries for their progress and will be monitoring the further development of these initiatives.

Provincial Water Quality Monitoring Network

The ECO recommended last year that MOE institute an effective long-term provincial water quality monitoring program and make the resulting data readily available to the public. The monitoring network, which consisted of 730 stations in 1995 and was reduced to 240 stations in 2000, was increased to 350 stations in 2002 and 2003. The ministry states that further development of the network will be examined in light of the recommendations of the Advisory Committee on Watershed-Based Source Protection Planning.

Natural Heritage Protection

Last year, the ECO recommended that MAH and MNR develop performance indicators for natural heritage protection under the Provincial Policy Statement and provide their findings to the public. MAH responded that further development of performance indicators is not expected to occur until after the five-year review of the Provincial Policy Statement is concluded. Further detailed work on performance indicators would follow and would reflect any revisions to the policies that come out of the review. MNR reported that it will work with MAH to develop the indicators that related to natural heritage.

Legislative Framework for Protected Areas

The ECO's 2001/2002 annual report recommended that MNR create a new legislative framework for provincial parks and protected areas, including conservation reserves, with the mandate of conserving biodiversity. In March 2003, MNR stated that it accepts the recommendation that the review of the legislation should occur. However, a review has not been scheduled. The ministry asserts that the *Provincial Parks Act*, the *Public Lands Act*, and other provincial legislation and policies effectively protect Ontario's provincial parks and conservation reserves. (See Creating a Framework for Biodiversity, pages 49-53.)

Mining Activity in Protected Areas

Last year the ECO reviewed conflicts between the conservation of lands under Ontario's Living Legacy status and the existing and ongoing mining activity in these areas. In March 2002, the Ministers of Natural Resources and Northern Development and Mines made a commitment that there would be no new exploration on untenured lands within OLL sites, and promised the development of a process to address existing mineral tenure in such areas. MNDM reported in March 2003 that productive discussions have been proceeding between the Ontario Prospectors Association, the Partnership for Public Lands, MNR and MNDM to resolve conflicts between mining lands and OLL site boundaries. The ECO will be monitoring the progress of these discussions.

Biodiversity

The ECO's 2001/2002 annual report recommended that MNR develop a provincial biodiversity strategy in consultation with affected ministries, municipalities, and stakeholders. In March 2003, MNR reported that it has recommitted to the implementation of the Canadian Biodiversity Strategy, and is currently involved in the approval of a national blueprint for addressing the threat of invasive species, the creation of Canada's Stewardship Agenda, the development of an agreement on biological information management, and the endorsement of a plan to develop a biodiversity index. However, the ministry did not express any intention of creating a provincial biodiversity strategy. (See "Creating a Biodiversity Framework for Ontario," pages 49-53 .)

Wolf Conservation

The ECO's 2001/2002 annual report recommended that MNR maintain the moratorium on the hunting and trapping of eastern wolves in the townships surrounding Algonquin Provincial Park until such time as the population is scientifically demonstrated to be viable. MNR reported that 50 eastern wolves had been radio-collared to monitor winter pack sizes and pup production to assess the response of the wolf population to the current hunting moratorium surrounding the park. MNR reported that the current 30-month moratorium will continue until June 2004, when the results of the monitoring program will be assessed to determine the need for further conservation measures. (See Wolf Conservation Strategy, pages 139-143.)

Species at Risk

The ECO's 1999/2000 and 2001/2002 annual reports encouraged MNR to initiate the necessary public debate to assess options to prevent the loss of species and their habitat in Ontario, including options to improve recovery planning and implementation. In March 2003, MNR stated that a draft Strategy for Species at Risk in Ontario is under development. The ministry also stated that it is reviewing its list of Vulnerable, Threatened, Endangered, Extirpated and Extinct species (VTEEE) and developing a new list of species at risk in Ontario to better reflect the terminology and definitions used in the national species at risk program. MNR stated that efforts are also under way to regulate four additional species under the *Endangered Species Act* (See the article on Species at Risk on pages 134-138).

Monitoring the Oak Ridges Moraine Conservation Plan

The ECO recommended in our last report that MAH, MNR and MOE begin planning and implementing the promised systems for monitoring and evaluating the Oak Ridges Moraine Conservation Plan (ORMCP). The ministries provided an update in March 2003. Their first priority will be to focus on the Official Plan and zoning by-law conformity exercise with municipalities. MNR and MOE are currently developing natural heritage and water resource technical papers to assist in the interpretation of the Plan. Training of municipal staff and technical consultants continued and MAH has initiated work on a site alteration and tree-cutting regulation.

With regard to monitoring and evaluation, MAH has been entering into data sharing agreements with municipalities and Conservation Authorities, and MNR is enhancing its geographic natural features database. All three ministries will work with municipalities to develop performance indicators to measure the effectiveness and the implementation of the ORMCP. The monitoring network will be established in partnership with stakeholder groups. MOE added that work on the monitoring system will commence, as planned, in early 2003.

Update on Fisheries Act Enforcement by MOE and MNR

Last year, the ECO reported that enforcement of s. 36(3) of the *Fisheries Act* by MOE and MNR was sporadic and inconsistent. To assess progress, the ECO requested that both ministries provide updates on enforcement of s. 36(3) and on the work of the Fish Habitat Advisory Group (FHAG). Both MOE and MNR reported that the FHAG has met on a regular basis during the reporting period to discuss revisions to the compliance protocol that this group developed in late 1999. If the proposed changes are environmentally significant, the ECO urges MNR and MOE to ensure that a notice is posted on the Environmental Registry before the final revisions are approved and that the revised protocol is published and distributed to the public.

The ECO also recommended that MOE amend the *Ontario Water Resources Act (OWRA)* so that a level of protection equivalent to that found in s. 36(3) of the *Fisheries Act* is contained in Ontario water protection legislation. In response, MOE stated that the *OWRA* "is a more effective tool" for the ministry because it "provides for a substantially higher penalty" and allows the issuance of Orders under s. 32 to ensure clean up and restoration. However, the order powers in s. 32 are rarely used, and the Ontario Court of Appeal ruled in June 2001 that prosecutions under the *OWRA* require evidence of impairment in water quality resulting from a discharge, a higher standard of proof than the *Fisheries Act*. Moreover, significant fines also can be issued under the *Fisheries Act*, and MOE rarely convinces the courts to impose very large fines under the *OWRA* and the *EPA*.

The ECO also asked MOE to describe any assistance in gathering evidence it might have provided to Environment Canada related to possible contraventions of s.36(3) in the past reporting year involving chemical discharges. In response, MOE said that in 2002/2003, the ministry assisted Environment Canada in one *Fisheries Act* investigation and laid 29 *OWRA* charges for water quality impairment. (MOE also reiterated its view that it regards s. 30 of the *OWRA*, which prohibits discharge of polluting material, as comparable to s.36(3) of the *Fisheries Act*.)

In its update to the ECO, MNR stated that the ministry had laid eight charges related to discharges of silt and sediment and issued three warnings. As of July 2003, MNR had obtained two convictions (one fine was $1,000 and another was $3,000), and six charges were still before the courts.

Prescribing the Technical Standards and Safety Act under the EBR

The ECO's 2000/2001 annual report recommended that the *Technical Standards and Safety Act (TSS Act)* be formally prescribed under the *EBR*. In the 2001/2002 report, the ECO noted that the *EBR* regulations had not yet been amended. In February 2003, the Ministry of Consumer and Business Services reported to the ECO that it was continuing to work with MOE to prescribe the relevant portions of regulations under the *TSS Act*, including the Liquid Fuels Handling regulation, under the *EBR*. It added that, in the interim, MCBS and the Technical Standards and Safety Authority (TSSA) continued to fulfil the *EBR* requirements that arise in carrying out the *TSS Act*. In April 2003, MOE posted a notice on the Environmental Registry proposing to amend O. Reg. 73/94 under the *EBR* to reflect the new *TSS Act*. The ECO notes that O. Reg. 681/94, which classifies instruments for the purposes of the *EBR*, also requires amendment.

In the Supplement to the 2001/2002 annual report, the ECO commented that MCBS and the TSSA should develop a policy on enforcement, make it available for public comment, and ensure that enforcement activities are transparent. In February 2003, MCBS assured the ECO that the TSSA provides the public with information on its enforcement activities through the publication of its annual report and a document entitled the "State of Public Safety," both of which are available on the TSSA's Web site. However, the ECO stands by the suggestion that the TSSA should develop a policy on enforcement.

Streamlined EA Processes

Ontario's *Environmental Assessment Act* provides for the creation and use of streamlined environmental assessment processes, called "Class" EAs, e.g., the Municipal Class EA. Last year, the ECO reviewed several streamlined EA processes, principally to ensure that comment, public participation, and appeal rights, as well as access to decision information on these processes, were comparable to those of the *EBR*. In some cases the ECO found gaps – for example, in process oversight and monitoring on the part of MOE's Environmental Assessment and Approvals Branch (EAAB).

In March 2003, EAAB reported that it developed an EA compliance monitoring strategy and highlighted the reporting requirements for proponents of new Parent Class EAs (i.e., proponents of Class EAs, such as MNR, will need to write up an annual report to submit to the EAAB). The annual reports will provide MOE with a mechanism to monitor the number and type of projects under each Parent Class EA, whether proponents are fulfilling conditions of EA approval, and other process-related issues. MOE indicates that annual reports will be reviewed by EAAB staff within three months of their receipt of a report, and if anomalies are found, a more detailed review or audit may take place. The ECO is encouraged to see that MOE is establishing reporting and review timelines for Class EA processes.

The ECO hopes that proponents of streamlined EAs will be able to improve their reporting and provide a meaningful assessment of their processes through this mechanism. Communicating the availability of these reports to the public would be useful for public education and scrutiny purposes.

Permits to Take Water (PTTWs)

MOE advised the ECO that it retained a consultant to investigate international best practices for administering water takings. In Phase 2 of this work, the ministry will review and evaluate options brought forward, e.g., the requirement for PTTW holders to publish annual water-taking report cards.

The ECO welcomes MOE's efforts to improve PTTW administration. The ECO's past research found that Registry proposal notices frequently contained poor descriptions of the magnitude, purpose and nature of a water taking, and that most of these write-ups probably originated from the PTTW proponent. An educational outreach effort may be required to ensure that permit holders are aware of the reporting requirements and to ensure that consistency and value is achieved in the report cards. This could be part of MOE's stakeholder involvement policy. The ECO notes that a proposal to make improvements of this nature to the PTTW program was posted on the Environmental Registry by MOE in April 2003.

The ECO would also welcome proposals by MOE for a province-wide database on actual water use – one of the options reported to be under consideration. This development could potentially contribute to the fulfillment of ECO recommendations dating back to 1996 that the province establish an inventory of current and past groundwater use and carry out an economic assessment of groundwater value, including current and replacement value. Finally, the ECO would welcome the development of methods for determining the ecological impact of water takings – another option that is currently under review.

Ozone-Depleting Substances

MOE reported in March 2003 that it is encouraging various industries to develop stewardship programs to collect and dispose of surplus ozone-depleting substances and that two industries have stewardship programs in operation. Also, MOE reported that Refrigerant Management Canada, an industry-led organization, has shipped 13 tonnes of chlorofluorocarbons (CFCs) to the Swan Hills Special Waste Treatment Facility in Alberta for destruction. The ECO welcomes initiatives to deal with the stock of CFCs still in service. Industry and government estimates suggest that at the current rate of collection and disposal it may take many years to deal with the CFCs still in use across Canada. MOE also referred to a pilot-scale destruction method developed in Ontario, the Gas Phase Chemical Reduction Process. The ECO is encouraged that Ontario-developed technology and expertise may be able to contribute to resolving a long-standing global environmental problem.

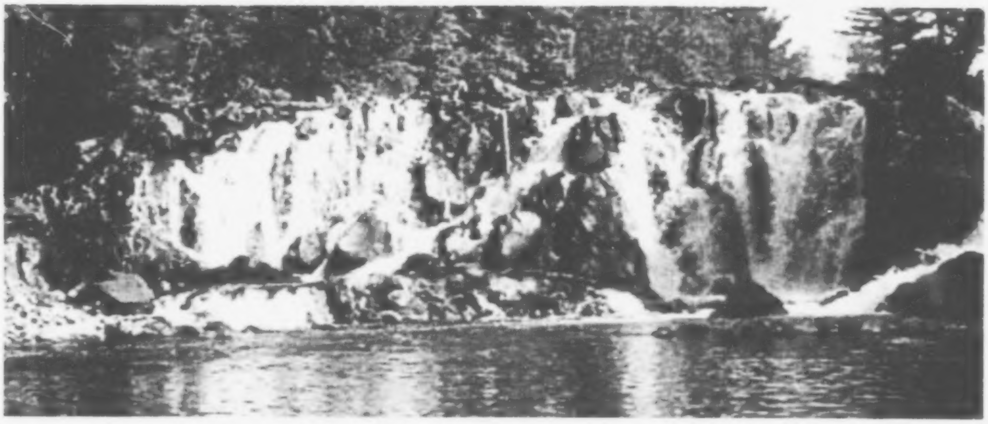
MTO's Use of Road Salt

MTO did not report any advances on setting up an ecological impact monitoring program to demonstrate the effectiveness of measures that reduce road salt releases – an ECO recommendation from our 2001/2002 annual report. The ministry did, however, mention its involvement in a road salt management process led by Environment Canada. Also, the ministry reports that it is moving ahead with the development of an index that will correlate salt use with weather to see if better spreading techniques are resulting in less salt being spread when less is needed.

Air Emissions and Odours from Cabinet Manufacturing

The ECO requested an update on MOE's progress in evaluating options for reducing toxic and odorous emissions from two cabinet manufacturing facilities in Thornhill, including MOE's involvement of the proponents and the public in the process.

In March 2003, MOE informed the ECO that one of the two facilities had purchased new equipment allowing the use of a water-based topcoat on cabinets. An application to amend its certificate of approval was nearing completion in December 2002, when production at the plant dropped significantly, with a change in management. MOE expects to meet with the company and its consultant in the near future. Although MOE informed the ECO that the ministry has not received any recent complaints regarding these two facilities, the ECO has been copied on five written odour complaints submitted to the local MOE District Manager during the period September 2002-April 2003.



Energy Sector Reforms of the Ministry of Energy

In the current reporting year, the Ministry of Energy (ENG) cited numerous examples of progress toward meeting past ECO recommendations on renewable and alternative energy, conservation and load management. (For greater detail on ENG's initiatives, see *The Electricity Pricing, Conservation and Supply Act, 2002,* pages 101-104.)

In the 1998 and 2000/2001 annual reports, the ECO encouraged the Ministry of Energy to develop improved minimum energy efficiency standards in Ontario. In April 2003, ENG reported that, since 1998, two amendments to O. Reg. 82/95 under the *Energy Efficiency Act* have established efficiency standards for 10 new products and strengthened standards for 14 other products. In March 2003, a new amendment was proposed to set efficiency levels for two products and update the referenced national standard for seven products.

The ECO is encouraged by these developments. It is apparent that ENG has begun to develop a framework for the promotion of alternative and renewable energy as well as energy conservation.

Ministry of the Environment – Consideration of SEV in Instrument Issuance

In the 2001/2002 annual report, the ECO once again recommended that MOE explicitly consider its SEV when making final decisions on instruments it issues. In March 2003, MOE asserted that explicit consideration of its SEV when making decisions on instruments would be an unnecessary duplication of effort. MOE repeated the position it has taken since the ECO's 1994/1995 report: because it issues instruments in accordance with policies, Acts and regulations that reflect the values contained in its SEV, these instruments will be consistent with these values. However, this argument does not address the fact that many MOE policies, Acts and regulations predate the existence of the *EBR* and therefore do not reflect its SEV.

Beyond the Recommendations

MBS – Green Workplace

The Green Workplace program is now under the jurisdiction of the Corporate Policy Branch within MBS. In keeping with recommendations in *"Managing the Environment: A Review of Best Practices,"* the ministry intends to promote environmental management systems within government that are consistent with international standards such as ISO14001. MBS has made progress in promoting the 3Rs – reduce, reuse and recycle – across the Ontario government. It has also become involved in pursuing three goals that are part of the Ontario government's strategy on alternative energy and fuels: to reduce electrical energy consumption in government buildings by 10 per cent; to purchase 20 per cent of the government's electricity usage from renewable energy sources; and, within a reasonable time, to adopt the goal of ensuring every newly constructed building is energy self-sufficient, using alternative or clean energy sources.

Prescribing the Ministry of Tourism and Recreation under the EBR

In April, this ministry reported that MOE undertook a process to amend O. Reg. 73/94 to reflect the recent name change of the ministry. (It was formerly the Ministry of Tourism, Culture and Recreation.) In July, the ministry advised that MTR was now prescribed under the *EBR*. The Ministry of Culture is now a separate ministry and is now prescribed under the *EBR* as well.

ORC – Sales of Government Lands

ORC reported that it cooperated with MNR and the City of Hamilton regarding the sale of a large parcel of land in the Stoney Creek area as studies of special features of the property proceeded. MNR announced the designation of a provincially significant earth science Area of Natural and Scientific Interest (ANSI) and MBS granted the core area of the ANSI to the local Conservation Authority. The government announced the transfer of approximately 420 acres of environmentally important land in the Oakville Land Assembly to the Town of Oakville for conservation on June 13, 2003.

ORC – Class EA Renewal

The process to renew the MBS Class EA for Realty Activities was launched in 1999 and continued during this reporting year. ORC reported that it held consultations on the Class EA and submitted the final MBS Class EA to MOE for approval on November 29, 2002. Comments to MOE were invited until January 24, 2003. ORC re-submitted the class EA to MOE for approval on June 27, 2003. *(For ministry comments, see pages 211-212.)*

Cooperation from Ontario Ministries

The Environmental Commissioner of Ontario and staff rely upon cooperation from staff in Ontario's provincial ministries to carry out the mandate of the ECO. Our staff are in constant contact with staff from the prescribed ministries with requests for information. Clear, prompt responses from ministries allow ECO reviews of the ministries' environmentally significant decisions to be conducted in an efficient and straightforward manner.

Section 58 of the *Environmental Bill of Rights* requires the ECO to include in our annual report to the Ontario Legislature a statement on whether or not prescribed ministries have cooperated on requests by the ECO for information.

Staff at the prescribed ministries are generally cooperative in providing information when it is requested. The 13 prescribed ministries and two agencies (the Technical Standards and Safety Authority and the Ontario Realty Corporation) each have one staff person who is designated as an *EBR* Coordinator or contact. Most of the day-to-day interaction between the ECO and the ministries occurs via these coordinators, which are very important positions with respect to effective *EBR* implementation. Among other things, these individuals are responsible for coordinating the ECO's access to documents needed for reviewing ministry decisions posted on the Registry. For the *EBR* coordinators at MOE and MNR, this can be a significant workload, and the ECO is pleased to observe that these documents are usually provided promptly. The ECO urges ministries to notify our office immediately of any changes in the *EBR* Coordinator position to ensure optimum communication and cooperation between the ECO and the prescribed ministries. The ECO also directly contacts ministry staff responsible for program delivery with specific, detailed information requests related to ministry programs.

The ECO makes monthly requests for information to the Ministry of the Environment's *EBR* Office (EBRO) through the manager, an arrangement that saves time for staff at both ends. In 2002/2003, the EBRO staff were consistently cooperative, and responses to ECO requests were thorough and informative. However, this year the ECO experienced a number of major time delays in obtaining needed information. In one case, a request to MOE for reports and information on sewage treatment plant operations, monitoring and compliance, filed with the MOE Deputy and the EBRO in late January, was acknowledged, with information promised by the end of February. As of May 8, however, none of the information requested has been provided by MOE. In another case, the ECO has been waiting 11 weeks for clarification of a minor point in an MOE media release.

Major delays in the provision of such data and reports by MOE are apparently due to requirements for multi-level internal approvals, and in some cases, central agencies such as Cabinet Office may be involved. Such delays leave the ECO potentially unable to complete research on issues of critical importance to the public. MOE is also very reluctant to give ECO staff direct phone access to technical specialists at the ministry, even though this is generally the most efficient way to share information.

Another major delay in responding to an information request was experienced by the ECO in its inquiry to MOE on the Selected Targets for Air Compliance program. On December 13, 2002, the ECO sent MOE a letter to indicate that it believed that the ministry should have posted notice of the program on the Registry for comment (see Unposted Decisions, page 22). A response was received from MOE in early May 2003. The ECO considers this delay of nearly five months to be unreasonable.

In general, as in most years, ECO staff experienced good cooperation from staff of all ministries when requests have been made directly to operations staff for details on field programs, investigations, routine work and research activities. *(For ministry comments, see page 212.)*

The ECO Recognition Award

Every year, the Environmental Commissioner of Ontario recognizes formally those ministry programs and projects that best meet the goals of the *Environmental Bill of Rights* or are considered best internal *EBR* practices. The ECO asks the ministries prescribed under the *EBR* to submit programs and projects that met either of these criteria. This past year, five ministries responded to our request, with a total of 10 projects for the ECO to consider. The submissions varied considerably in their scope and content, which made comparing them a challenge. An arm's-length panel reviewed a short list of the submissions and provided advice on the selections for our 2002/2003 ECO Recognition Award.

Of the many worthwhile projects submitted to the ECO this year, three have been singled out as particularly noteworthy. The following two runner-up projects deserve honourable mention.

The ECO recognizes the Ministry of the Environment for its work on the *Safe Drinking Water Act*, which, for the first time in Ontario, provides Ontarians with the statutory right to safe drinking water and provides a clear legal and policy framework for the production and delivery of drinking water. This Act will be the basis for the delivery of safe drinking water for the foreseeable future. In particular, the ECO would like to commend MOE for carrying out an extensive public consultation through the Environmental Registry – first posting a policy document and then the draft legislation. (Further information on the *Safe Drinking Water Act* can be found on pages 80-85.)

The ECO also commends the Ministry of Natural Resources for identifying a new Area of Natural and Scientific Interest (ANSI) using a "Confirmation Procedure" developed in April 2000. The ministry used the procedure to guide the scientific evaluation of the Eramosa Karst, making it the first earth science area to be confirmed as an ANSI using the procedure. The Eramosa Karst, near Stoney Creek, is rated the best example of a karst (a limestone area marked by ridges, rocks, caverns and underground streams) in any protected area in Ontario. The ECO also recognizes that the Ontario Realty Corporation, the City of Hamilton, the Hamilton Conservation Authority, the public, property owners and developers all played important roles in this initiative.

The recipient of this year's Recognition Award is the Ministry of Natural Resources. The ECO is pleased to recognize the work of MNR officials and staff in the development of Ontario's Living Legacy (OLL). Announced on March 29, 1999, the goal of OLL is to protect 12 per cent of northern and central Ontario. Areas identified under OLL will support biodiversity initiatives and reflect the range of ecosystems and natural features found in the area. OLL also has the goal of establishing 378 new protected areas – the largest single expansion of parks and protected areas in Ontario's history – as well as identifying nine signature sites where significant natural heritage values warrant protection.

At the time, OLL was the largest and most complex public consultation exercise ever carried out by MNR, with over 8,000 comments submitted via the Environmental Registry. MNR has continued to use the Registry as OLL is being implemented.

Ontario's Living Legacy is a significant achievement and contributes to the purposes of the *Environmental Bill of Rights*, particularly to the protection and conservation of biological, ecological and genetic diversity and the protection of ecologically sensitive areas.

Part 8:

Developing Issues

Introduction

Each year, the ECO draws attention to a handful of issues that deserve stronger and more focused attention from Ontario ministries. The ECO's concern is that while ministries may be working away at fragments of issues, they too often fail to grasp a wider ecosystem perspective related to a given environmental problem. This failure to see the bigger picture has very practical consequences, since it can result in government policies and programs that are inadequate, misdirected, or even counterproductive. This year the ECO has highlighted two such areas of concern.

Globalization of the agricultural industry has created new challenges for Ontario farms. Outbreaks of "mad cow" disease (BSE) in Britain in the 1990s, and an economically devastating single case in western Canada in May 2003, have brought about changes to the rendering industry that may have significant consequences to the environment. A second challenge has arisen with deer and elk farms that may increase risks associated with chronic wasting disease – a disease similar to "mad cow" disease – that has devastated several farm herds of deer and elk in North America. The ECO has reviewed the current management situation in Ontario.

In the 1990s, the Ministry of Natural Resources privatized its tree seedling nurseries, and today it relies heavily on private growers to grow seedlings for the private forestry market. Seeds for these trees are collected and provided by the Ontario Tree Seed Plant, the last publicly owned piece of the system. The ECO has reviewed the capacity of the present system to meet the needs of re-establishing forests on private lands in Ontario.

Alternative Livestock, Dead Animals and Disease Risks

In recent years, the Walkerton tragedy has made Ontarians far more concerned about water source protection. Thinking "beyond the near and now" necessitates being vigilant about emerging changes in management practices that may influence the way we protect our water and our other natural resources.

In the last decade, unusual diseases in domestic livestock, alternative livestock — for instance, elk and deer farms — and wildlife have raised new concerns in Ontario. And in late spring 2003, the significance of one of these new diseases was demonstrated when a single case of BSE — "mad cow" disease — in Alberta devastated the beef producing industry in Canada.

The disposal and handling of dead farm animals have been regulated for decades under the *Dead Animal Disposal Act*. The Ministry of Agriculture and Food has advised that this Act will be repealed, and that the transport, disposal and handling of domestic livestock will be regulated under two new Acts — the *Food Safety and Quality Act* and the *Nutrient Management Act*. In view of these changes, and of recent events, the ECO has reviewed two areas of animal management that may present new or increased risks to humans and to wildlife, as well as the potential for polluting ground and surface water.

Changes in the Rendering Industry

Animal mortalities are a fact of life for commercial livestock producers. Livestock and poultry die from disease, accidents, or competition. Up until a few years ago, most livestock that died on farms were routinely trucked away to rendering plants. In 1998, about 300,000 dead animals were removed from Ontario farms by licensed deadstock collectors. Farmers received a reasonable payment for the deadstock from collectors, who were in turn able to profit from the service by selling the animals to a rendering plant.

Rothsay, a division of Maple Leaf Foods Inc., is the largest rendering company in Ontario, operating two plants, one in Dundas and the other in Moorefield. Together these plants account for 90 to 95 per cent of the province's rendering capacity. The company collects material, ranging from restaurant wastes to dead farm animals, from over 7,000 clients in 30,000 locations in Ontario. The rendering process produces products such as tallow, pet food, soap, animal feed and other useful products. In this way, central processing generally provides a preferable alternative to disposing of dead animals by landfilling or burial on farmsteads.

One of the uses of deadstock in the rendering industry is the production of MBM (Meat and Bone Meal) used as a feed supplement for many types of livestock and poultry. Following the outbreak of BSE in the U.K. in the early1990s, a regulation was introduced in 1997 under the Canadian *Health of Animals Act* to prohibit the feeding of MBM or other material derived from a ruminant (sheep, cattle, goats, bison, deer, llamas, etc.) to another ruminant. The reason for the restriction is that the primary route of transfer of BSE is through the food chain via re-feeding of infected animal material. Moreover, a rare human disease known as new variant Creutzfeldt-Jakob Disease (CJD) has been linked with the consumption of BSE-contaminated beef products.

Prion Diseases

BSE (Bovine Spongiform Encephalitis), commonly referred to as "mad cow" disease, is one of a number of diseases in the class of Transmissible Spongiform Encephalopathies (TSEs). This class includes a disease known as scrapie in sheep, chronic wasting disease (CWD) in deer and elk, Creutzfeldt-Jakob Disease (CJD) and kuru in humans. The agent of infection is known as a prion. Prions are small particles made up of protein, and are found in many living tissues in association with nucleic acid. The transmission and physiological effects of prions are poorly understood at this time, but cross-species infection does occur, the most noteworthy being the transfer to humans via the consumption of BSE-infected beef cattle. The predominant mode of transfer appears to be through the consumption of meat that includes brain and neural tissue. While the potential for inter-species transmission has been demonstrated in experimental settings, extensive barriers exist to prevent natural transmission between species. The only animal prion disease known to be of human health significance is BSE.

Prions appear to be extremely resilient to environmental degradation, and even resistant to inactivation at the high temperatures associated with the rendering process. Therefore, national and state governments around the world have made it illegal to feed rendered products to ruminant animals that originate from ruminant animal material.

Partly as a result of the BSE outbreak in the U.K., renderers were already facing lower demand for their products. Other market developments had resulted in changes to the "rules" surrounding input materials for rendering. For example, responding to increasingly stringent standards for consumer meat products in world markets, Rothsay began to take steps in 2001 to protect against contaminated materials entering the food chain. As of September 2002, Rothsay would accept no deadstock for rendering unless accompanied by a guarantee that the material did not contain specified veterinarian drug residues. Livestock farmers were faced with the expense and logistical difficulties of finding an alternative means of disposal for "contaminated" livestock — in some cases shipping to renderers in the U.S. — or carrying out on-farm burial.

The single case of BSE in Alberta, discovered in May 2003, created a crisis situation for the markets for all beef products, including the products of the rendering industry. The embargo on beef remained well into the summer of 2003 resulting in the loss of over a billion dollars to the Canadian economy.

This resulted in an emergency situation for rendering operations across Canada. In Ontario, Rothsay has now segregated its rendering streams. It will process the ruminant and mixed materials, including ruminant deadstock at its Dundas plant, and process other species materials at its Moorefield plant. A certificate of approval was issued by MOE in July 2003 to allow Rothsay to collect and store deadstock at the Dundas plant, and to burn tallow from the rendering process as a fuel at both their Ontario plants.

Companies engaged in deadstock pickup services, already struggling from declining markets for the last five years, have been hit hard by these recent events. In many cases, deadstock collectors have gone out of business or initiated pickup fees of up to $150 per head to remove larger dead animals. The continued existence of the estimated 31 deadstock pickup services is very tenuous at the present time. In spring 2001, OMAF began to provide funding to help keep these services afloat through its Healthy Futures for Ontario Agriculture program. Responding to the current situation, OMAF recently committed a further $350,000 to this program.

Whether due to higher pickup costs or lack of service, Ontario livestock farmers are being forced to pursue other alternatives for deadstock disposal — either on-farm burial or composting.

On-Farm Burial of Dead Animals

Farmers can legally and safely bury animals, but if carcasses are not disposed of in an appropriate manner, a serious potential water pollution hazard can be created by bacterial pathogens. At least five major pathogen groups may be present in these animals: *Campylobacter, Clostridium, Salmonella, Listeria* and coliform bacteria, including *E. coli*. A species of *Campylobacter* and a strain of *E. coli* were implicated in the Walkerton tragedy.

Burial during the winter is difficult unless preliminary excavation has been done. As a result, animals may be left on the surface, exposed to scavengers, presenting a possible mechanism of disease transmission. Improper burial of animal carcasses can result in charges being laid under the *Dead Animal Disposal Act*.

Ontario's Environmental Farm Plans offer guidance to farmers about the risks to groundwater from on-site burial. Risk is decreased in relation to the fineness of soil texture and increasing depth to groundwater. Most geological settings in Ontario offer moderate to high risk for groundwater contamination. Only in clay soils, at depths of greater than 5 m to groundwater or in clay loam soils at depths to groundwater greater than 15 m, is there considered to be very low risk of groundwater contamination. Coarser soils and shallower groundwater depths present moderate risks, which can be accommodated if deadstock are buried at no more than 1,000 kilograms per hectare of land. However, burial is not an option at all on sites where bedrock is within one meter of the surface or where soils are classified as sand or muck.

Composting of Dead Animals

OMAF staff are aware of these problems and have evaluated a number of alternatives to on-farm burial, including centralized composting facilities. Composting of dead animals on farms has long been practised by some farmers, and is the most common form of disposal on poultry farms. Composting involves layering of dead animals with dry high carbon-containing material such as straw and manure. Decomposition in properly designed facilities is facilitated by bacteria and micro-organisms that favour high temperatures. Animals as large as sheep and pigs have also been successfully composted, and improvements in technology may allow larger animals to be composted as well. Properly done, this form of disposal can yield a nutrient-rich compost, which can then be safely returned to the land as fertilizer.

> *... the changes to the rendering industry resulting from the current BSE crisis have increased the frequency of improper dead animal disposal in the countryside. The attendant risks of spreading of disease and contamination of ground and surface water are serious ...*

ECO Comment

The changes to the rendering industry resulting from the current BSE crisis have increased the frequency of improper dead animal disposal in the countryside. The attendant risks of spreading of disease and contamination of ground and surface water are serious. The ECO recommends that OMAF continue to develop alternatives to on-farm burial of animal mortalities, so that groundwater, wildlife and public health are protected.

When the *Dead Animal Disposal Act* is repealed, the disposal and handling of domestic farm animals will be regulated under the *Nutrient Management Act* and the *Food Safety and Quality Act*. On-farm disposal, which has the potential for direct environmental impacts, will be addressed under regulations to be developed under the *Nutrient Management Act*. Deadstock collection, transport and acceptance for rendering will be managed by OMAF under the *Food Safety and Quality Act* regulations. However, since neither Act is prescribed for investigations under the *Environmental Bill of Rights*, Ontario residents will have limited opportunities to use the *EBR* if they have concerns about the improper handling of dead animals. This is an unfortunate gap. There is a need to ensure that these Acts are prescribed for *EBR* investigations. In addition, the ECO recommends that these two Acts be prescribed for other parts of the *EBR*, such as reviews.

Farmed Elk and Deer Risks

ECO research into changes in livestock disposal practices in Ontario brought another, related issue to our attention — the potential for other diseases similar to BSE to show up in "alternative livestock" operations such as deer and elk farms. Chronic wasting disease (CWD) affects deer and elk and is a major concern in Canada. CWD is another in the relatively rare class of diseases known as *Transmissible Spongiform Encephalopathies*. (See Prion Diseases, page 188.)

Chronic wasting disease in elk and deer was first noticed in 1967 in captive mule deer at a research facility in Fort Collins, Colorado. Subsequently, in 1980, captive elk in the Sybille research facility in southeastern Wyoming were diagnosed with CWD. In 1985 veterinarians discovered the disease in wild elk, generally within 30 miles of the two research sites. CWD in wild elk began to occur in other locales in the western U.S. and the disease crossed into Canada in 1996, when it was discovered in elk at a Saskatchewan elk farm that had originally imported stock from the U.S. Between 1996 and late 2001, all elk on any Saskatchewan farm had to be destroyed if CWD was found in even a single animal. Over four years, 7,409 elk were destroyed, one quarter of the province's domesticated herd. Of those, 193 tested positive for chronic wasting disease. Because prions are the agent of infection and are extremely resistant to natural decay in the soil, the land where these herds were kept cannot reasonably be used for raising elk or ruminant livestock for the foreseeable future. Saskatchewan elk are prohibited from export from the province and are essentially quarantined under the federal *Health of Animals Act.*

One of the most alarming aspects of the Saskatchewan situation was the potential for release of infected animals to the wild. The disease struck during a severe drought and at a time when the market for elk products had diminished. Deer and elk farmers were so stretched financially for expensive feed that some threatened to release the animals into the wild. It is not clear whether or to what extent this happened. However, Saskatchewan natural resources personnel recently found CWD in wild deer, indicating a potential transmission between farmed and wild deer populations.

The sale of breeding stock out of affected areas has allowed the CWD outbreak to spread. The Wisconsin Department of Natural Resources (DNR) began monitoring that state's wild white-tailed deer herd for CWD in 1999. The first positive cases in the state – and the first positive cases east of the Mississippi River – were found on February 28, 2002, in three deer in south-central Wisconsin. The source of the wild deer CWD in Wisconsin is believed to be from escaped farmed deer. The Wisconsin DNR has developed plans to kill all of the deer in a 411-square-mile eradication zone where the disease was first discovered, and cut the population by 50 per cent in a broader 10-county management zone (25,000 to 40,000 deer).

The above information indicates the geographical trend and the potential severe consequences if CWD is introduced into Ontario. The disease has not been detected in the province to date, but unless regulatory agencies are extremely vigilant, there is a risk that this disease could occur in Ontario, with potentially devastating consequences for the native deer populations.

Deer and elk farming is a small but significant farm industry in Ontario — an estimated 350 farms and 25,000 animals. However, there is no requirement to register the farms, although the federal government is contemplating registration requirements following the Saskatchewan outbreak of CWD. Under the federal *Health of Animals Act*, a number of diseases, including CWD, must be reported to the government by the owner of an infected animal. Following the Saskatchewan outbreak, quarantine and traceback procedures were initiated by the federal government to determine possible transmission of CWD to other provinces or states. Federal regulations stringently control the movement of elk and deer into any province, and movement permits are required to move from farm to abattoir or to another farm.

In 2002, OMAF ran a voluntary pilot testing program of checking deer/elk tissue samples submitted by Ontario deer and elk ranchers. Ministry staff have set up a laboratory with a CWD identification capability in Guelph. Between April and November 2002, approximately 100 elk and 153 deer were tested, with no CWD symptoms detected. In addition, MNR checked 151 samples from a planned cull of wild deer in the fall and winter of 2002, again with no detection of CWD.

ECO Comment

The ECO is concerned that not enough is being done to ensure that an outbreak of CWD does not occur in Ontario. Currently, provincial ministries appear to be relying on the federal Canadian Food Inspection Agency's enforcement of provisions of the federal *Health of Animals Act* to prevent CWD. If prevention fails and CWD begins to occur in Ontario, it must be rapidly detected through surveillance programs, contained and eradicated. It would be preferable to have systematic checks of elk and deer farms done by provincial veterinarian officials rather than to rely solely on federal procedures and voluntary participation by farmers in OMAF and MNR testing programs.

Some provinces do have legislation that permits this level of scrutiny of alternative livestock farms. Quebec, for example has a provincial *Animal Health Protection Act*. This law includes a requirement that a provincial veterinarian certify disease-free status prior to the transportation of elk or deer within that province. Without such legislation in Ontario, biosecurity and animal health protection for this kind of animal appear to be minimal. The transport of wild or farmed deer and elk should be subject to provincial as well as federal approvals and rigorous record-keeping.

As of August 1, 2001, Rothsay's rendering operations no longer accepted the carcasses or abattoir wastes from elk and deer. However, deadstock from elk and deer farms are sometimes used for feed at zoos, in mink feed, and for dog food on hunt farms. It should be noted that Ontario's *Dead Animal Disposal Act* applies only to swine, horses, cattle sheep and goats. Hence, disposal of dead deer and elk is largely left to the discretion of the farmer. Alternatives are on-site burial, composting, paying for pickup and transport to the U.S. for rendering, or disposal in local landfills. There has been at least one case of a township refusing to allow an abattoir processing elk and deer to dispose of waste and offal at a landfill. Because of the high resistance of prions to environmental degradation, improper disposal or unregulated byproduct usage can present a risk to wildlife if CWD is involved. Historically, diseases that occurred at low levels in the wild naturally attenuated over time. In confined facilities, elk and deer are more susceptible to infection by CWD and other diseases. CWD could spread to wild populations through the escape of infected farm deer or elk, and then through natural migration.

The spread of CWD across North America has resulted in huge costs to the public and the destruction of many confined and wild deer and elk stocks. International border controls for importation would appear to be adequate to prevent the commercial introduction from CWD-infected areas of deer and elk destined for farms in Ontario. However, because CWD has a long incubation time — two to three years — the introduction of CWD-infected deer and elk from farms in western Canada prior to the quarantine of the Saskatchewan herds could be an issue.

The ECO commends the Ministry of Natural Resources and the Ministry of Agriculture and Food for measures taken to date and recommends that they aggressively operate surveillance, monitoring and testing programs for CWD in farmed elk and deer, and in wild deer and other susceptible species. A provincial strategy for containment and carcass disposal should also be developed in cooperation with the federal government, in the event that an infected animal is identified. It would also be advisable for Ontario ministries to liase with Wisconsin and Saskatchewan resource management and regulatory agencies to see what management approaches have been developed, following their costly experiences with alternative livestock industries. *(For ministry comments, see page 212.)*

Recommendation 11

The ECO recommends that the Ministries of Agriculture and Food and Natural Resources develop legislative and regulatory mechanisms to enable licensing of deer, elk and other alternative livestock operations and to facilitate certification, stock tracking and disease surveillance.

Recommendation 12

The ECO recommends that the Ministry of Agriculture and Food develop financial support programs for deadstock disposal and alternative approaches for safe disposal of deadstock.

Seed Stocking and Afforestation in Ontario

The Province of Ontario has a long history of involvement with tree-planting and restoring forest cover to the landscape. As agriculture and settlement expanded in the late 19th century, the province recognized the importance of afforestation — the establishment of forests on marginal lands, especially on lands not previously forested. Early afforestation efforts were driven by concerns related to soil erosion, soil infertility and wind damage.

When the first of 10 provincial nurseries was created in 1905, landowners were able to acquire trees at no cost. This no-fee service continued until 1980, when a nominal fee was introduced for trees. This method of sale was termed "over the counter" and was extremely popular with landowners, Conservation Authorities and other groups. Over the counter sales accounted for some 792 million seedlings distributed and planted between 1905 and 1996.

During the early 1990s, the Ministry of Natural Resources implemented a new business plan that refocused MNR's role in forestry on certain core business areas, and a decision was made to end the ministry's traditional operation of nurseries.

MNR announced the closure of the Thunder Bay, Midhurst, Chapleau, and Gogama nurseries in 1993, and, in 1996, closed and sold the Kemptville and Orono nurseries. The ministry completed the process of privatizing seedling production with the closure of the Dryden, Swastika, Thessalon and St. Williams nurseries by 1999. The Ontario Tree Seed Plant near Angus, established in 1923, is the last remaining seed collection and seedling production facility operated by MNR.

As part of this shift towards privatization, MNR downsized operations across the province and cancelled a number of programs that had been offered to the public for many years (see Afforestation Inititiatives, below). The impact on afforestation programs in southern Ontario was significant. Non-governmental organizations are now having to assume what were once MNR's responsibilities.

Afforestation Initiatives in Ontario

Agreement Forests (1921-1998)

- MNR managed reforestation efforts on behalf of rural municipalities.
- Approximately 147.5 million trees were planted.

Woodlands Improvement Act (1966-1993)

- MNR worked with private landowners to reforest their properties.
- Approximately 213 million trees were planted.

Project Tree Cover (1992-1997)

- MNR assisted in this multi-agency program.
- Program ceased due to inadequate funding, MNR nursery closures.

Conservation Authorities (1946-present)

- Approximately 9 million trees have been planted on private lands to date.
- Approximately 30 million trees have been planted on Conservation Authority properties to date.

Stewardship Councils (1996-present)

- The councils assist in small scale reforestation efforts on private lands, sharing costs.
- Approximately 218,000 trees have been planted.

Ontario Power Generation (2000-present)

- The program is part of OPG's Greenhouse Gas Management Strategy and Biodiversity Policy, in partnership with non-governmental organizations.
- Approximately 250,000 trees are planted annually.

Seedling Production

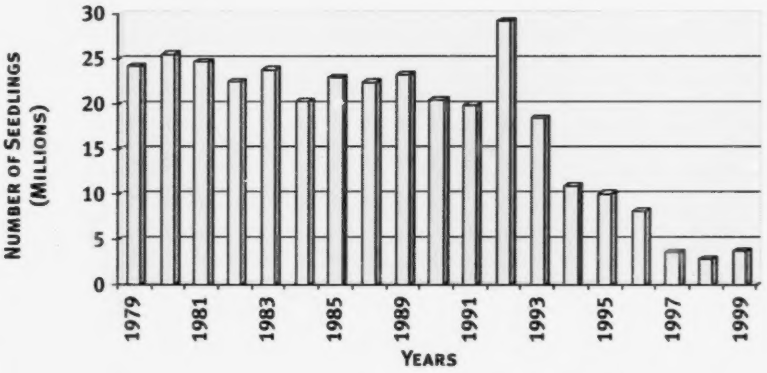
Afforestation programs declined from an estimated peak in 1992, when nearly 30 million tree seedlings were sold by MNR for private land planting, to less than three million seedlings by 1998. The current level of planting on private land is not well known, since there are no ministry programs to track this information from the now-privatized nursery sector.

The loss of a centralized demand forecasting and order system has had a significant impact on the supply of seedlings being grown for planting on Ontario's private lands.

When MNR operated the nurseries, seedling production was based on both historical demand levels and fairly consistent contact with private landowners, and prior to 1992, the number of seedlings being grown was not restricted. District ministry staff played a lead role in making sure sufficient seed was collected from local sources in their regions.

The efficiency of MNR's nurseries and its ordering system allowed large numbers of orders to be rolled up into larger blocks of seedlings. Also, each ministry nursery did not have to carry all species and stock types for every seed source, allowing certain nurseries to specialize and achieve additional economies of scale. MNR's administrative infrastructure then allowed the seedlings to be shipped to the appropriate nursery for distribution.

Seedling Production by MNR Nurseries (1979–1999)



In contrast, private nurseries today are reluctant to produce tree seedlings in large quantities without being paid a portion of the production cost up front. The production of seedlings can require the ordering, and pre-payment, of stock up to four years in advance. Private nurseries cannot afford to dispose of large numbers of unsold seedlings, given the monetary investment made in growing them. There is, however, general consensus in the industry that private nurseries are collectively capable of matching the historical levels of seedling production.

Seedling Quality

The production and planting of native species of trees and shrubs is an increasingly important issue for afforestation in Ontario. The use of local seed sources for seedling production is necessary for the long-term ecological success of planting efforts. More than 100 native trees and shrubs are found in Ontario. The collection of their seed is complicated by infrequent seed years, uncertain markets, and the varying experience of private operators. Most important species, such as red and white pine, bear abundant seed only occasionally, and these seed years vary from region to region. The maintenance of a diverse seed bank therefore requires considerable skill, experience and long-term planning.

A large number of tree and shrub species is found across significant portions of the province, and many of these are adapted to the growing conditions and specific climates of local areas. Planting this genetically appropriate stock from local sources ensures better survival and growth of the plants and preserves the genetic diversity of the species. The use of genetically appropriate stock also requires less follow-up planting, reducing long-term costs.

> *...the ministry's withdrawal from seed collection coordination has now forced private nurseries to be responsible at times for obtaining their own seed, reducing the availability of genetically appropriate stock from local sources...*

The Ontario Tree Seed Plant is the last remaining vestige of ministry involvement in seed collection. The facility collects seed from 50 different species, supplying both smaller nursery operations as well as large forestry companies. The Ontario Tree Seed Plant also serves as a storage facility. Its function as a seed bank allows for the collection of seed from across Ontario's seed zones to be stored, as a precaution against those years when seed cannot be collected.

Currently, the lack of coordination and collection of appropriate seed is limiting the production of seedlings by private nurseries. The ministry's withdrawal from seed collection coordination has now forced private nurseries to be responsible at times for obtaining their own seed, reducing the availability of genetically appropriate stock from local sources. Some private nurseries have even resorted to obtaining seed from American businesses due to the lack of a centralized collection system.

Seedling Costs

MNR historically regulated the price of seedlings from ministry nurseries under the *Forestry Act*. The ministry also underwrote a portion of the cost of seedlings, allowing private landowners to reforest their properties at lower than market cost. During the last few years of MNR's operation of the nurseries, the production costs were approximately $0.56 a seedling, but the ministry regulated the selling price at $0.28. The ministry rationalized this decision to underwrite the cost of seedlings as an investment in a healthy natural environment.

The closures of the ministry nurseries has had a significant impact on the seedling market in Ontario. Private landowners had been accustomed to the historical prices for seedlings and are now reluctant to bear the true costs. The price of seedlings now varies between the private nurseries, from as low as $0.22 to as high as $1.50 depending upon species, stock type and order size. Private nursery operators have identified the lack of financial incentive programs by the government and the absence of public education as barriers to replicating MNR's historical levels of seedling production.

The only financial subsidy currently offered to private landowners in Ontario is the Managed Forest Tax Incentive Program (MFTIP). This voluntary program is available to landowners who own four hectares or more of forest land and who agree to prepare and follow a Managed Forest Plan for their property. Participating landowners have their property reassessed and classified as Managed Forest and are taxed at 25 per cent of the municipal tax rate set for residential properties. However, this program is restricted to properties already having a minimum number of trees per acre and, as such, serves more to conserve existing woodlots rather than to promote afforestation on marginal lands. Further, the ECO is concerned that the market value assessment methodology of the Municipal Property Assessment Corporation is in need of revision, since the current system is not effectively encouraging participation in MFTIP.

ECO Comment

MNR's decision not to operate its system of nurseries has affected the production and planting of trees on private lands in Ontario. It has had the greatest impact in southern Ontario, where issues surrounding the maintenance and restoration of biodiversity are most acute. Market forces now play a stronger role in determining the extent to which private lands are forested. This shift toward privatization has brought about rising seedling prices, stock quality that is sometimes questionable, and, due to market uncertainty, the reluctance of private growers to grow stock years in advance based on speculation.

The afforestation of private lands benefits the public. The Province of Ontario recognized long ago the many direct and indirect services that forests provide Ontarians, including the prevention of soil erosion, soil infertility and wind damage. As the understanding of forest ecology has increased in modern times, so has the understanding of the importance of afforestation.

In 1993, the Government of Canada ratified the international Convention on Biological Diversity. Biodiversity is understood to be the variety of native species, the genetic variability within each species, and the different ecosystems and landscapes they form. Afforestation is an important method of addressing the increasing loss of Ontario's biodiversity. The planting of native trees and shrubs on private lands serves to restore degraded habitat and maintain the province's biodiversity.

In 2002, Canada ratified the Kyoto Protocol in an effort to address the effects of global climate change. Young, rapidly growing forests trap carbon dioxide and help mitigate the effects of climate change. Efforts toward the establishment of forests today will benefit generations of Ontarians to come. The province's support of the afforestation of private lands would be a tangible commitment to addressing climate change.

The absence of appropriate seeds and funding mechanisms, along with market uncertainty, have caused serious problems for afforestation in Ontario. A large-scale afforestation plan using a variety of native species cannot be put into effect today because of the lack of a system to project, plan, and fund future demand. The ECO believes that it is in the public interest for MNR to take an active role in the afforestation of private lands in Ontario.

The ECO encourages the Ministry of Natural Resources to develop a comprehensive policy on private land forestry, including the establishment of a program to subsidize afforestation by private landowners. The ministry itself has identified the need to create such a policy. The development and implementation of an afforestation policy would play an important role in conserving natural heritage in Ontario. (See Creating a Biodiversity Strategy for Ontario, pages 49-53.)

The ECO encourages MNR to maintain and enhance the operation of the Ontario Tree Seed Plant. Its function as a seed bank for native species of trees from across the province's seed zones is a public good. The Ontario Tree Seed Plant is an essential component for the future of afforestation in the province. The availability of genetically appropriate seed stock plays a crucial role in the maintenance and restoration of Ontario's biodiversity. MNR should ensure that the Ontario Tree Seed Plant maintains sufficient stock of all native species from across the province's seed zones.

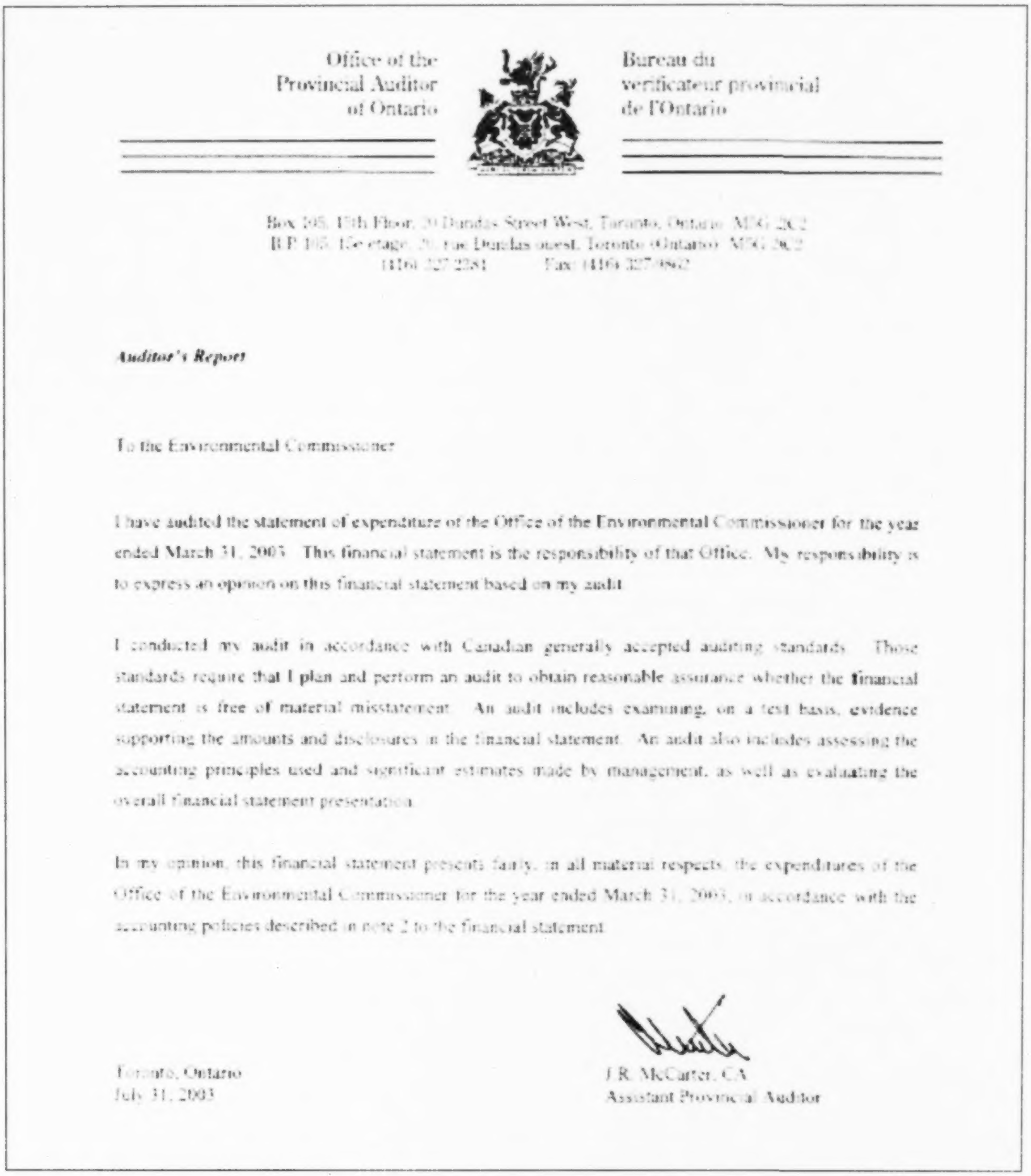
The ECO also encourages MNR to assist in funding the establishment and operation of a non-governmental agency to coordinate the forecasting of seedling demand. Such an agency should also collect and manage genetically appropriate seed stock, and distribute seedlings in Ontario. *(For ministry comments, see page 212.)*

Recommendation 13

The ECO recommends that the Ministry of Natural Resources ensure that the Ontario Tree Seed Plant maintains sufficient seed stock of all native species from across the province's seed zones.

Part 9:

Financial Statement



Office of the
Provincial Auditor
of Ontario

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Auditor's Report

To the Environmental Commissioner

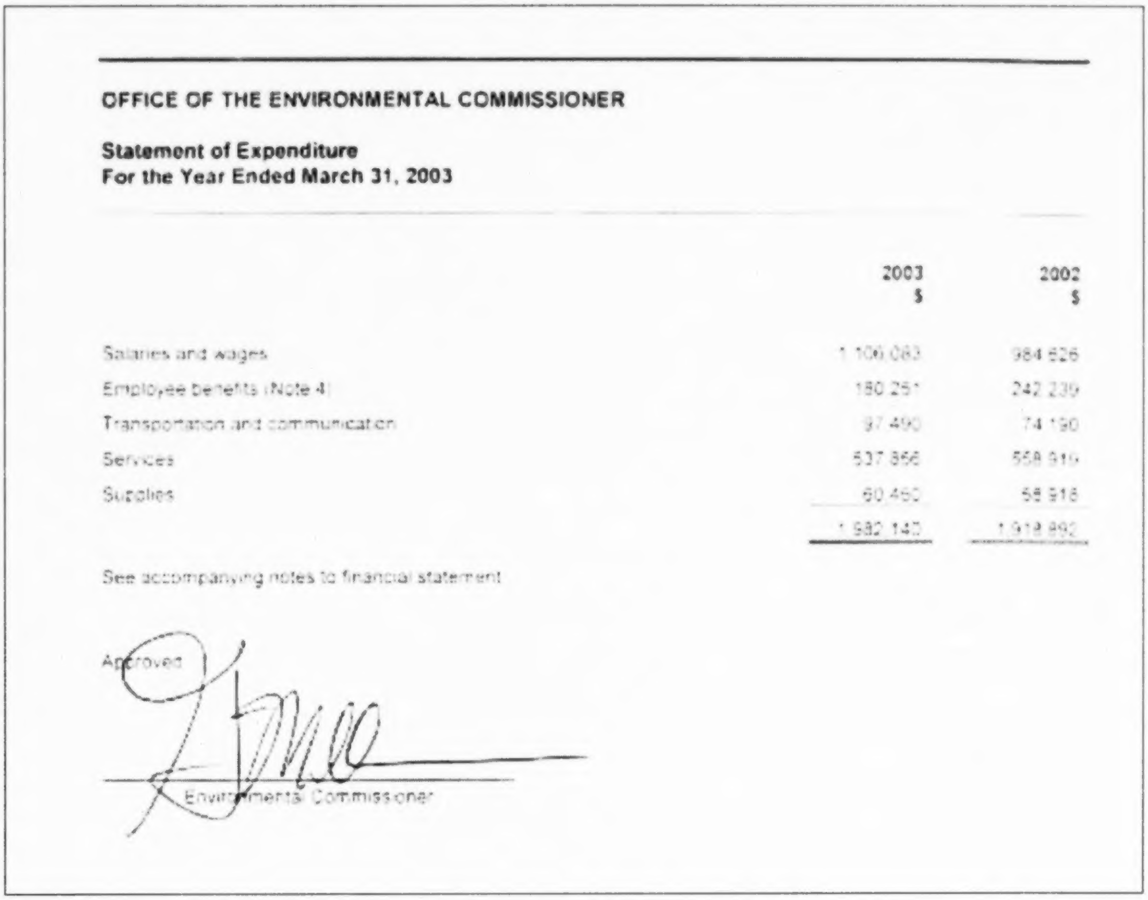
I have audited the statement of expenditure of the Office of the Environmental Commissioner for the year ended March 31, 2003. This financial statement is the responsibility of that Office. My responsibility is to express an opinion on this financial statement based on my audit.

I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the financial statement is free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statement. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In my opinion, this financial statement presents fairly, in all material respects, the expenditures of the Office of the Environmental Commissioner for the year ended March 31, 2003, in accordance with the accounting policies described in note 2 to the financial statement.

Toronto, Ontario
July 31, 2003

J.R. McCarter, CA
Assistant Provincial Auditor



OFFICE OF THE ENVIRONMENTAL COMMISSIONER

Statement of Expenditure
For the Year Ended March 31, 2003

	2003 $	2002 $
Salaries and wages	1 106 083	984 626
Employee benefits (Note 4)	180 251	242 239
Transportation and communication	97 490	74 190
Services	537 856	558 919
Supplies	60 460	58 918
	1 982 140	1 918 892

See accompanying notes to financial statement

Approved

Environmental Commissioner

ENVIRONMENTAL COMMISSIONER OF ONTARIO

PUBLIC SECTOR SALARY DISCLOSURE ACT FOR THE CALENDAR YEAR ENDING DECEMBER 31, 2002

Employees paid $100,000 or more in 2002

Surname	Given Name	Position Title	Salary Paid	Taxable Benefits
McRobert	David	Env. Sr. Policy Analyst/Counsel	$105,399.19	$227.54
Miller	Gordon	Environmental Commissioner	$119,884.17	$259.72

Prepared under the Public Sector Salary Disclosure Act

OFFICE OF THE ENVIRONMENTAL COMMISSIONER

Notes to Financial Statement
March 31, 2003

1. BACKGROUND

The Office of the Environmental Commissioner commenced operation May 30, 1994. The Environmental Commissioner is an independent officer of the Legislative Assembly of Ontario, and promotes the values, goals and purposes of the *Environmental Bill of Rights, 1993 (EBR)* to improve the quality of Ontario's natural environment. The Environmental Commissioner also monitors and reports on the application of the *EBR* participation in the *EBR* and reviews government accountability for environmental decision making.

2. SIGNIFICANT ACCOUNTING POLICIES

(a) Basis of Accounting

The Office uses a modified cash basis of accounting which allows an additional 30 days to pay for expenditures incurred during the year just ended.

(b) Capital Assets

Capital assets are charged to expenditure in the year of acquisition.

3. EXPENDITURES

Expenditures are paid out of monies appropriated by the Legislative Assembly of Ontario.

Certain administrative services are provided by the Office of the Assembly without charge.

4. PENSION PLAN

The Office of the Environmental Commissioner provides pension benefits for its permanent employees (and to non permanent employees who elect to participate) through participation in the Ontario Public Service Pension Plan (PSPF) which is a multiemployer plan established by the Province of Ontario. This plan is accounted for as a defined contribution plan as the Office has insufficient information to apply defined benefit plan accounting to this pension plan. The Office's contribution to the Plan during the year was $62,141 (2002 – $92,645) which is included in employee benefits.

The cost of post-retirement non-pension benefits were paid by MBS and are not included in the statement of expenditure.

5. LEASE

The Office has a lease agreement with its landlord for its current premises. The lease payments for the next five years are as follows:

	$
2004	114,879
2005	133,859
2006	167,784
2007	184,009
2008	186,959
	787,490

Appendix A:

Ministry Comments

Ministry Statements of Environmental Values

MOE: MOE plans to complete Phase 1 (updating SEVs to reflect current ministry names, mandates and core businesses) for *EBR* ministries by summer 2003. Phase 2, which includes multi-ministry discussions on how to improve SEVs, is currently ongoing. Public comment will be sought through the Environmental Registry later in the fiscal year.

MBS: MBS has completed its changes as part of Phase I of the SEV Review project, led by the Ministry of the Environment. MBS has updated its SEV to reflect current information about its mandate and core businesses.

MTR: MTR is participating in the SEV updating efforts, including prescribing the Ministry of Tourism and Recreation and the Ministry of Culture under the *EBR*.

Instruments

Cataraqui Region Conservation Authority Land Disposition

MNR: MOE and MNR interpreted the regulations in 2002 to permit the posting of information notices for conservation authority lands dispositions.

Unposted Decisions

Energy Initiatives

MOE: A proposal notice (RA03E0020) relating to the threshold for energy projects was published on the Environmental Registry on July 3, 2003.

ENG: The ministry is committed to posting environmentally significant energy-related initiatives on the Environmental Registry. On July 3, 2003, the government announced that it will introduce legislation to establish a Green Power Standard, which would require Ontario's electricity system to secure an additional 1 per cent of its current electricity needs from renewable sources in each of eight years, starting in 2006.

Selected Target for Air Compliance (STAC) Program

MOE: MOE's intention is to provide clear and accurate information. The STAC program, ongoing since 1999, supplements existing compliance activities and is not based on any new policy or regulatory authority. All STAC requests and any resulting abatement is carried out by District Provincial Officers.

Exception Notices

Communal Water Supply, Village of Redditt

MOE: The delay [in issuing an order] was caused by the slow response from Canadian National, which prompted MOE's emergency measures. The public were kept informed through meetings with the Local Services Board and were supportive of MOE's actions.

Late Decision Notices

MNR: All items referred to, with the exception of RB8E3001 (Hunting and Trapping of Wolves in Algonquin), have now been updated, or decision notices posted.

Aggregates Used in Road Construction

MTO: Highway and construction material standards have been upgraded over time in response to increased economic development and societal demands for increased safety and more reliable transportation. At the same time, efforts have been made to decrease environmental impact and reduce the use of virgin aggregates.

Highway Standards are mature and reflect international standards that ensure the safety of the driving public. Updates to construction materials standards are typically incremental in nature and developed with scientific, social, economic and environmental considerations in mind. The heavier demands imposed by traffic requires the greater use of higher quality, more skid-resistant aggregates. This often results in longer transportation distances and resulting impacts. This is more than offset by longer life of pavements and bridges resulting in fewer rehabilitation cycles and reduced impacts on road users (congestion, pollution, accidents).

MTO encourages and permits the use of recycled materials. Specifications permit their use within the appropriate engineering and environmental limitations. Unconventional materials such as sulphur, ceramics, glass, shredded tires and slag aggregates have also been utilized, with limited success. Slag aggregates were extensively used in hot mix in the 1980s. Pavement performance problems resulted in their being banned by the ministry in 1991. Increased recycling material proportions in asphalt beyond conventional practices have also been tried during the past ten years. Durability and environmental concerns discouraged many of these initiatives. We continue to explore recycling opportunities, such as in-place and conventional recycling.

MNR: MNR recognizes that the aggregate industry needs to perform more progressive rehabilitation to reassure the public that aggregate extraction is an "interim land use" and to minimize the potential impacts to the environment resulting from aggregate extraction. To achieve this objective/goal, the ministry is working with the Aggregate Producers' Association of Ontario to convey to the aggregate industry, through education and voluntary compliance, the importance of undertaking rehabilitation. In addition, MNR is taking a more proactive enforcement approach (i.e., issuance of rehabilitation orders) to ensure that rehabilitation is performed, where warranted.

Environmental Impacts of Sewage Treatment Plant Effluents

MOE: As part of its commitments under the Canada-Ontario Agreement, MOE is reviewing policies on effluent discharges from municipal STPs to develop a management framework for municipal wastewater. The review will be carried out in the context of the government's commitment to implement the recommendations of Justice O'Connor's Part Two Report of the Walkerton Inquiry.

Funding for STPs

Ontario has contributed $19 million in addition to a federal contribution of $9 million to upgrade the Windsor municipal treatment facility to a secondary facility. The Thunder Bay municipal treatment plant will be upgraded to a secondary treatment facility in early 2004. Through the OSTAR Infrastructure program, first announced in May of 2000, the province has already given municipalities well over $10 million for infrastructure projects specifically related to wastewater or sewage systems. Additionally, the province is further committed to providing $83 million to municipal partners over the life of the program (2005/06) for work related to wastewater or sewage systems. OSTAR funding is based on eligible costs and will be shared among the 29 small or rural municipalities that have applied under Option 2 for wastewater or sewage projects.

STP inspection and compliance

Since 1998, MOE has implemented an automated information system to track inspection results and compliance trends. MOE collects samples of effluent with every inspection of STPs. MOE implemented the Municipal Sewage Information System (MSIS) to track inspection results and compliance trends in late 2000. As of April 1, 2003, MSIS was replaced by the Integrated Divisional System, which significantly improved MOE's ability to track and report on inspection and compliance information. Municipal STPs are inspected at least every four years. Non-compliant facilities are inspected annually. The only exception is when the facility has a ministry approved, multi-year program in place to address non-compliance. In these cases, the facilities are inspected bi-annually. MOE uses both voluntary and mandatory abatement to ensure compliance with Certificates of Approval and Regulations.

Public Consultation on STPs

MOE believes consultation at the planning stage (Class EA) is the most effective approach to ensuring issues are identified and resolved before decisions are made. MOE is requiring that all "parent" Class EAs include monitoring and compliance requirements such as annual reports and five-year reviews. All Class EAs and related information will be made available publicly at MOE. The public will be able to monitor and track projects by examining the annual reports and five-year reviews.

Database Management

Phase 1 of a data system upgrade is now being tested, and the second phase is targeted for completion by the end of 2003. The system will streamline the input of data by industry, allow the capture of additional information (including the categorization of tertiary STPs), and provide greatly improved data extraction and reporting capabilities. A data analyst has also been hired. MOE is currently developing a centralized database of surface water information. This database will help staff produce reports on surface water. MOE published overviews of surface water quality for the Lake Ontario and Lake Erie basins in 1999 and 2002.

STPs and Landfill Leachate

MOE has agreed, pursuant to an application under *EBR*, to review existing policies as they pertain to the release of landfill leachate to wastewater treatment plants. This *EBR* review is expected to be completed in February, 2004. Pursuant to Section 71 of the *EBR*, the applicant will be given notice of the outcome of the review within 30 days of its completion.

Biodiversity Framework for Ontario

MNR: Ontario remains committed to the Canadian Biodiversity Strategy (CBS) and is working with federal, provincial and territorial counterparts to implement the strategy. Collaboration among jurisdictions has resulted in an agreement to work in several priority areas, including biodiversity science, invasive alien species, biological information management, monitoring and reporting on biodiversity status and trends and engaging Canadians in stewardship. Jurisdictions are currently developing a national invasive species plan and have developed Canada's Stewardship Agenda that promotes the conservation of biodiversity. Ontario continues to address specific goals and directions in the CBS.

Achievements in supporting biodiversity conservation include: regulating new parks and conservation reserves under the Ontario Living Legacy; regulating species under the *Endangered Species Act* and developing recovery strategies, developing a Conservation Strategy for Old Growth Forest Ecosystems, supporting private land stewardship activities; and, purchasing critical areas under the Ecological Land Acquisition.

Air Monitoring and Reporting

MOE: MOE has enhanced its emission reporting outreach to further promote awareness among Ontario reporting facilities. These initiatives include: (1)Establishing a Stakeholder Workgroup, representing industry, environmental groups and the Government, to provide recommendations on effective outreach activities. The Workgroup will particularly target Class C facilities; (2) Continuing training on O.Reg.127/01 through annual workshops. These workshops are hosted by MOE or in collaboration with industry associations and/or Environment Canada's NPRI program.

Creating and Conserving Electricity

ENG: The government is putting in place measures to promote the development of renewable energy, including tax incentives for corporations which generate electricity from cleaner alternative and renewable sources, a 10-year corporate income tax holiday, a capital tax exemption and 10-year property tax holiday for newly acquired generation assets, a full retail sales tax rebate for generation building equipment, and 100% corporate tax write-off for the cost of newly acquired generation assets.

The ministry is preparing legislation to implement a Green Power Standard. An aggressive target has been established of adding 1,500,000 megawatt hours of new renewable energy (equivalent to 1 per cent of the Province's current electricity consumption) to Ontario's electricity grid each year for an eight-year period beginning in 2006.

The ministry is taking steps to increase self-generation by developing rules for province-wide access to net metering. Individuals who purchase solar energy systems are eligible for a retail sales tax rebate. The 2003 budget proposes to extend eligibility for this rebate to include the purchase of wind, water and geothermal energy systems. The budget also proposes an additional 100 per cent corporate income tax write-off for newly acquired assets to self-generate electricity from cleaner alternative and renewable sources.

The government is also implementing initiatives to promote energy conservation and load management. Tax incentives have been introduced to encourage consumers to purchase Energy Star-rated appliances. Corporations will be eligible for a 100 per cent corporate income tax write-off for the purchase of designated energy efficient equipment.

The ministry has also implemented a public education campaign to promote energy conservation, with a particular emphasis on increasing public awareness about the economic and environmental benefits of energy efficient appliances and compact fluorescent lighting. On June 4, 2003, the Minister of Energy directed the Ontario Energy Board to consult with stakeholders to identify and review options for the delivery of demand side management. The Directive also requires the Board to report to the minister with the results of their analysis and recommendations by March 1, 2004.

Smart Growth

MMAH: The Western and Eastern Panels have been holding public consultations in the spring and summer of 2003. Their final reports to the minister are anticipated in the late summer of 2003.

MNR: MNR will continue to participate in and support the government's Smart Growth initiative.

Nutrient Management Act

OMAF: OMAF is currently planning on posting an Enforcement/Monitoring/Compliance protocol on the *EBR*. In the short term, OMAF has committed to making part of the NMPs and NMSs available upon request to the public. In the long term, when the database is fully developed, this same information will be more easily accessed by the public through technology. This would ensure that the decision-making process is transparent to the public. This would not include information normally private to the farm business.

In developing the *Nutrient Management Act* and regulation, each step to date, including the discussion paper, Bill 81, Stage 1 and Stage 2 draft regulation and protocols have been posted on the *Environmental Bill of Rights (EBR)* registry. OMAF is committed to continue posting all materials including any amendments to the regulations on the *EBR* registry for full review by the public.

COA – The New Canada-Ontario Agreement on the Great Lakes

MOE: The 2002 Canada Ontario Agreement (COA) sets clear lines of authority and responsibility for expected results and commitments related to Areas of Concern (AOCs) through the multi-year COA workplans. Environment Canada and the Province of Ontario are coordinating and monitoring progress to address information gaps, define restoration targets, set priorities and monitor recovery in the AOCs.

MOE coordinates the funding that municipalities, Conservation Authorities and non-profit delivery agencies are allocated to implement specific commitments in the 2002 COA. Funding is obtained by submitting proposed projects for review by MOE and MNR. The review is to determine which projects best meet the COA commitments. If a project is approved, funding would be provided on an annual basis. Projects are coordinated with the other signatories of COA to ensure integration, where possible. The amount available from the province during the COA agreement is $51.5 million. It became available in the spring of 2002 for a 5-year period.

MNR: The government has allocated $50 million to MOE and MNR to implement projects in support of the current COA agreement. MOE is the lead provincial agency for COA. MNR is implementing a work plan that is linked to specific commitments identified in COA. Progress will be documented and reported. Several of MNR's programs are consistent with the commitments outlined in COA. MNR's COA work plan builds on existing programs and partnerships to further work in the areas such as species and habitat rehabilitation, wetlands, invasive species, species at risk and the provision of fish and wildlife population benefits.

Exotic Species

MNR: Ontario and the federal government are drafting a national strategy on non-native species. MNR co-chairs the Aquatic Invasive Species Task Group with DFO, OMAF and the CFIA co-chair the Terrestrial Plants Task Group. Following public consultation, the strategy will be taken to the appropriate governments for approval to implement in 04/05.

Waste Diversion in Ontario

MOE: The Ministry considers the Blue Box Program to be a success. Over the last 10 years, there has been a 74% increase in the amount of recovered recycling materials collected through the municipal Blue Box Program. In 2001, Ontario households diverted 699,000 tonnes of blue box material from landfill. A typical Material Recovery Facility will process 95% of the incoming material.

The government is wholly accountable to enforce the *Waste Diversion Act* and the programs under it. In addition, the *WDA* provides the minister with powers to approve programs, make policies and rules, and make minister's regulations. The *WDA* also requires the minister to initiate a review of the Act before June 27, 2007.

The *WDA* is not prescribed for Investigation (Part V, *EBR*), as offences would be administrative in nature and not environmentally significant. Environmental offences would be addressed under the EPA, which is already prescribed. The WDA is not prescribed for reviews because the *WDA* includes a review requirement within a five-year period.

The *WDA* requires the WDO to consult the public when developing, implementing and operating the program. The MOE-WDO Operating Agreement obligates WDO to post draft plans for the public to view. The MOE's *EBR* posting is intended as a final opportunity for comment.

Safe Drinking Water Act

MOE: The Ontario government is committed to implementing all of Justice O'Connor's recommendations to ensure that Ontario has safe and clean drinking water.

This fall, the government intends to introduce legislation on source protection planning, and will consult with key stakeholders and experts to develop technical and implementation details related to source protection planning (as recommended by the Advisory Committee).

New Rules for Managing Biomedical Waste

MOE: The regulatory amendment requires all existing hospital incinerators to close by December 6, 2003. Certificates of Approval for hospital incinerators issued prior to this amendment will be revoked. Hospitals will require Part V waste management certificates of approval to install new biomedical incinerators.

When the regulation was announced in December 2002, there were in the order of 28 hospitals with operating incinerators. As of July 2003 there are between 12 and 15 that remain currently in operation.

Incineration will not totally be replaced; anatomical waste must be incinerated. However, all other biomedical waste can be treated by non-incineration technologies.

MOE will monitor and track the closing of hospital incinerators. As of June 1, 2003, there are 12 existing hospital incinerators in operation. Ministry staff participate in several annual healthcare seminars and continue to provide support on a regular basis to healthcare facilities. Ontario has sufficient capacity at private sector off-site facilities to treat and dispose of all biomedical waste.

Changes to the Air Quality Index

MOE: The health risk-based AQI under development is unique and would be a leading-edge effort, the first of its kind, and would take into account cumulative effects of pollutants. MOE is currently reviewing the existing Air Pollution Index (API) and investigating ways to incorporate measurements of particulate matter in its formulation.

Northern Boreal Initiative

MNR: MNR recognizes the imperative of making wise decisions for the NBI area, understanding that it is a portion of Ontario's northern boreal forest with minimal resource development or access. MNR designed Community-based Land Use Planning as a framework that implements the Ontario Forest Accord directive for orderly development and responds to the expressed interest of individual First Nations. Through planning, forestry may be recommended as a new use if supported by strategic direction that balances forestry with traditional uses, protected areas and other opportunities.

Additionally, MNR must prepare a description of the social, economic and environmental effects of forestry to support an approach to seek *Environmental Assessment Act* coverage. This will require the collection of new information and will build upon the existing knowledge of forestry in the boreal forest. Consultation will continue to be a priority.

Ecological Land Acquisition Program

MNR: ELAP is linked to the Ontario Living Legacy commitment to natural heritage protection. With ELAP ending in 2004, MNR is developing a new program proposal which will: further integrate land acquisition activities; better explain program objectives and criteria; be a multi-year activity; provide better stability; and seek enhanced support. Opportunities during policy development will be given for external input in addition to Environmental Registry requirements.

Natural Heritage Strategy for MNR's South-Central Region

MNR: The ministry is pleased that the ECO has recognized its efforts in developing the South-central Region Natural Heritage Strategy and welcomes suggestions that can be incorporated into future versions of the strategy. The strategy recognizes that the completion of a natural heritage system provides a strong foundation for Ontario's Living Legacy and is critical to Ontario's system of parks and protected areas. As implementation proceeds, opportunities will occur for external input, through the Environmental Registry as required, and by other means.

The Electricity Pricing, Conservation and Supply Act

ENG: The government's price protection program does not have any impact on revenues for generators of renewable energy. These generators continue to sell their power through the wholesale market and receive market prices for their electricity, just as they did before the enactment of the *Electricity Pricing, Conservation and Supply Act, 2002*.

The ministry is aware that there is a price differential between electricity generated from new renewable sources and electricity generated from conventional sources. To address this situation the ministry is implementing measures to promote the development of renewable energy, including tax incentives and an aggressive Green Power Standard, for which legislation will be introduced.

The ministry is developing a tracking system to facilitate transactions of alternative and renewable energy and to provide information to the public on the environmental benefits of electricity generated from these sources. The tracking system will also provide annual information on Ontario's generation mix and enable Ontarians to keep track of the addition of new renewables. A proposed regulation was posted on the Environmental Registry on March 21, 2003, for 45 days.

Sustainable Water and Sewage Systems Act

MOE: MOE and MAH are currently developing the consultation approach on how regulations will be developed under the Act. The province is committed to working with our key stakeholders on the development of the regulatory detail and consulting fully with other interested parties.

Water Management Planning Guidelines

MNR: With respect to the redevelopment of existing waterpower facilities and new facilities, MNR will work with proponents to ensure that data and information that are collected to identify and mitigate site-specific environmental effects under the *EA Act*, can also be used to integrate the operation of a changed or new facility into the broader riverine environment, i.e., as required under the *Lakes and Rivers Improvement Act*, including water management planning.

The Water Management Planning Guidelines for Waterpower set out MNR's policy on water management planning for waterpower facilities. The appendices to the guidelines provide technical direction on how the policy is to be implemented. In MNR's view, technical or scientific documents that provide direction on how policy is to be implemented do not, in and of themselves, constitute policy. MNR will, however, continue to post information notices about these appendices and consider any comments that are received.

Thirty-four of Ontario's northern rivers are protected as provincial parks where, by policy, commercial waterpower development is not permitted. Ontario's Living Legacy is adding to the protection of our rivers.

Reviews and Investigations

Investigations: Is MOE using the tools available to it?

MOE: MOE's *EBR* Office began a comprehensive review of its practices and procedures in the handling of reviews and investigations in April 2003. In relation to the abandoned well, MOE became aware of the violation in August 1999 and the problem was resolved by November 1999. A request for an investigation was made to the Ontario Ombudsman in 2000, who subsequently determined that further investigation was not warranted.

Noise Discharge from Cook's Mill

MOE: Ministry staff attempted to resolve the noise issue through Certificate of Approval amendments that authorized noise abatement equipment to be installed. Mandatory abatement and enforcement action was taken in accordance with ministry procedures.

Jurisdiction for enforcing the control of nuisance contaminants such as noise is a municipal responsibility. MOE has developed model noise by-laws to assist municipalities in dealing with these matters.

Clearcut Size Restriction

MOE: MOE found that MNR was not out of compliance with Condition 27. Condition 27 permits clearcuts larger than 260 hectares, for biological/silvicultural reasons, if they are documented. MNR documented all cuts larger than 260 hectares that were investigated.

MOE's investigation examined the actual wording of Condition 27 and determined there was no limit on the number or size of clearcuts larger than 260 hectares allowed.

Although the Environmental Assessment Board may have intended fewer clearcuts larger than 260 hectares, its reasons and the Conditions do not provide definitive direction. MOE could not find that MNR was out of compliance based on what the Board "may have intended."

MNR: The discussion in the EA Board's approval is complicated, as is the issue of clearcut size and emulation of natural disturbance patterns. MNR does not share the ECO conclusion.

The EA Board's Condition does not specify the extent or limitations for these exceptions. The Board recognized the need to allow for exceptions for biological and silvicultural reasons and to provide for a range of sizes to emulate natural disturbances. The Board also noted that it was "important that 260 hectares not become the standard size clearcut, resulting in only a few clearcuts being larger or smaller."

Species at Risk

MNR: Species considered for regulation under the *ESA* include those that have been designated as nationally endangered by COSEWIC and/or have been recommended for provincial endangered status by the COSSARO. There are currently 35 species being considered for regulation. Twelve species have been regulated since 1999. There are 4 species currently in the approval process. MNR will continue to consult landowners/landholders of property on which species being considered for regulation are known or expected to occur. Aquatic species are not included in Regulation 328 as they are under federal jurisdiction and are protected under the provisions of the *Federal Fisheries Act*.

Ontario has initiated discussions with Environment Canada to work toward a bilateral agreement to outline the roles and responsibilities of each government and identify ways to harmonize our species at risk program. A draft "Species at Risk Strategy for Ontario" is completed and under review. MNR staff guidelines for Landowner Contact, Recovery Planning and Regulating Species have been completed. A review of the *ESA* will be considered at the appropriate time.

Wolf Conservation Strategy

MNR: Scientists believe that the Eastern Wolf is part of a large population, estimated at a minimum of 10,000, distributed through most of Ontario, two other provinces and several northeastern states. The ministry is currently reviewing Ontario's VTEEE species list and is considering the recommendations of the Committee on the Status of Species at Risk in Ontario (COSSARO) with respect to the Eastern Wolf.

The Fish and Wildlife Conservation Act provides authority for controls on wolf harvest. The ministry will introduce appropriate legislative measures when and where necessary as it has done in the past. The ministry is monitoring Algonquin Park wolves. The effect of the 30-month moratorium and other management actions will be evaluated and appropriate action taken. The present level of annual wolf harvest is not impacting the sustainability of the population. Harvest information is collected through mandatory reporting by non-native trappers, dealers, tanners and taxidermists, and voluntary reporting by native trappers and hunters.

SWARU

MOE: In 2002, MOE implemented a comprehensive three-point strategy for updating Certificates of Approval:

1. Protocols for updating Certificates were developed and implemented for air, waste, sewage and water. The Protocols formalize a continuous improvement cycle so that Certificates keep pace with new environmental protection requirements.
2. Updates to Certificates are initiated by compliance and enforcement staff through the Field Directed Alert.
3. The third part of the strategy incorporates a risk-based proactive approach that targets environmentally significant facilities for updating over a 4-year period.

MOE's Integrated Divisional System is used as a tool to support initiatives to update Certificates. MOE did undertake an extensive review of the C of A for the SWARU incinerator, including a process which allowed for public comments. This process led to the closing down of the SWARU incinerator. MOE was not able to provide investigation results to the applicants because the report contains personal and other information that may be considered confidential and therefore subject to certain exemptions from public disclosure under the *Freedom of Information and Protection of Privacy Act*. However, MOE did provide other information to the applicants. The SWARU Community Liaison Committee (CLC) did not review the process for stabilizing the fly ash since it was not within their mandate. The Hamilton District office, prior to the *EBR* request for investigation, was not aware of any requests to review the approvals-related documents or any ash-handling issues being raised by former members of the CLC.

Sludge Spreading Sites

MOE: MOE recognizes the ECO's suggestion to prescribe instruments for biosolids under the *EBR*. Currently, biosolids land application sites, approved by MOE as "organic soil conditioning sites," are exempt from posting on the Environmental Registry. Recognizing the value of consultation and notification for identifying technical concerns related to organic soil conditioning site approvals, MOE drafted proposed requirements for Consultation and Notification. These requirements were posted on the Environmental Registry on April 25, 2003, for a 30-day public comment period. Staff at MOE are currently reviewing comments received as a result of the posting.

Sound-Sorb

MOE: MOE has done extensive studying of Sound-Sorb and has found that there are no adverse environmental impacts. However, due to public concern, MOE is conducting various extensive technical studies. It should be noted that such studies could be conducted whether or not a material is considered to be a waste under environmental legislation or a product. The groundwater monitoring program is under way. The pre-sampling of Sound-Sorb aided in identifying the proper groundwater parameters to be analyzed. This program is much more extensive than was originally discussed, as it includes a sampling regime for each of the 4 seasons and twice the number of monitoring wells. In 1994, Regulation 347 was amended to promote recycling. The amendment includes exemptions that apply to municipal waste, hazardous waste or liquid industrial waste under certain conditions. The regulation is not meant to cover products that are recycled materials. In March 2003, a formal policy review confirmed the exemption and that Sound-Sorb is not subject to Regulation 347. Current environmental legislation requires a Certificate of Approval for the spreading of paper fiber biosolids.

MOE recognizes the need to review policies and take action. When policy or regulatory impacts are demonstrated to be different than expected both in modeling and in practice, MOE realizes that it must review its policies and reframe its position. MOE, however, supports recycling of wastes into other products and uses where the impact on the environment and human health is benign. Landfilling ultimately should only be the repository of last resort.

Ashbridges CSOs

MOE: MOE's *EBR* review concluded that the combined sewer overflow issue was "legal non-conforming." The combined sewers were constructed in accordance with the standards of the early 1900s and were cleaned and maintained as necessary. Also, no new unapproved connections were made to the sewers.

The allegations regarding the discharge were also referred to the Investigations and Enforcement Branch (IEB) for additional review and follow up. IEB evaluated the information thoroughly and determined there was insufficient evidence to warrant any further investigation. MOE has worked with the City of Toronto to develop a Wet Weather Flow Management Master Plan (Plan). One of the objectives of the Plan is to address the issue of combined sewer overflows. The Plan, once implemented, will bring Toronto into conformity with MOE's requirements for combined and partially separated sewer systems. The proposed implementation of the Plan includes a stormwater treatment facility at Ashbridges Bay/Coatsworth Cut by 2008-2012. The Plan has been accepted in principle by Toronto Council and is presently out for public comment. MOE will continue to work with the City regarding the final approval and implementation of the Plan, including the Ashbridges Bay facility.

Safety-Kleen Investigation

MOE: It is the jurisdiction of Human Resources Development Canada (HRDC) to respond to concerns regarding worker health and safety relating to air quality. Both parties did, however, review odour problems relating to the clean-out of Tank 15. It was determined that for this event a contractor took insufficient care to control the air discharges during the tank cleaning procedures.

MOE's inspector took prompt action upon becoming aware of the incident to bring the matter to the attention of the company and the contractor. The discharge was subsequently halted. There were no detectable impacts off-site as a result of this operation. The on-site inspector conducts routine perimeter checks to assess odours. Detectable odours off-site are followed-up to determine whether they are contraventions of the facility's CofA or Section 14 of the *EPA*.

Whether or not there was off-site environmental impact is relevant. Although by legal definition the incident may be subject to reporting requirements under the *EPA*, ministry staff were satisfied with HRDC taking the lead in the investigation as worker health and safety was the predominant issue. Had there been off-site environmental impact, it would have been appropriate for ministry staff to take the lead in any subsequent investigation.

The incident was documented in the daily field inspection report prepared by the environmental inspector. Consistent with ministry practice, the incident was not documented utilizing MOE's computerized occurrence reporting system as it was deemed to fall under the jurisdiction of the HRDC. Had the inspector determined that the odours were causing an off-site impact, or if contraventions of the facility's CofA or Section 14 of the *EPA* were identified, appropriate action would have been taken to document the matter in the occurrence reporting system, and to initiate follow-up.

MOE's inspector took prompt action upon becoming aware of the incident by bringing the matter to the attention of the company and the contractor in the interest of the workers and to prevent an off-site impact. The discharge was subsequently halted, there were no detectable impacts off-site, the incident was being referred to HRDC, and further action by MOE was not necessary.

Ministry Responses to ECO Recommendations

Update on Fisheries Act Enforcement by MOE and MNR

MNR: MNR continues to work with the Fish Habitat Advisory Group to revise the compliance protocol and will review *EBR* posting requirements when agreement has been reached by the various agencies.

MOE: MOE is working with the FHAG and MNR to revise the Protocol. In 2002/03, MOE laid 29 OWRA charges for water quality impairment and assisted Environment Canada in one investigation. (Section 30 of the OWRA, which prohibits discharge of polluting material, is comparable to subsection 36(3) of the *Fisheries Act*.)

Prescribing the Technical Standards and Safety Act under the EBR

MCBS: The *EBR* and its regulations are the responsibility of the Ministry of the Environment. O. Reg. 73/94 was amended in June 2003, and MCBS will continue to work with MOE to make the relevant changes to O. Reg. 681/94. In the interim, both MCBS and the TSSA continue to fulfill the *EBR* requirements under the *TSS Act*.

The TSSA currently requires its enforcement staff to follow publicly available behavioural protocols in carrying out their duties. However, the TSSA will work to develop a publicly available compliance strategy for matters regarding its administration of the *TSS Act*.

Permits to Take Water (PTTWs)

MOE: On April 21, 2003, MOE posted a proposal (RA03E0009) to amend the Water Taking and Transfer Regulation and improve the PTTW program. To guide the implementation of a province-wide database on water use, the MOE is funding a pilot study to assess mandatory monitoring and reporting by all permit holders.

Ozone Depleting Substances

MOE: In March 2003, MOE posted proposed regulatory amendments and an intent to consult on industry stewardship programs (RA03E0007, RA03E0008). In June 2003, MOE began formal consultations on the safe collection, storage and disposal of surplus ozone depleting substances.

Road Salt

MTO: While best management practices have been shown to reduce salt use by as much as 20% when fully implemented, determining the ecological benefits of salt reduction is a challenge. However, the ministry will continue to work with Environment Canada and MOE to find an appropriate ecological monitoring program for trial.

Cooperation from Ontario Ministries

MOE: MOE's Environmental Bill of Rights Office works closely with the ECO. The information requested [reports and information on sewage treatment plant operations] required significant research and preparation by ministry staff in all divisions. MOE staff were in contact with ECO staff to advise on the ministry's approach and progress in responding to the request. MOE staff have provided extensive information in response to the request and have had three follow up meetings with the ECO to clarify and provide additional information. The ministry is developing a process to facilitate direct access by the ECO to ministry technical staff.

Alternative Livestock, Dead Animals and Disease Risks

MNR: MNR and other appropriate agencies are working on a surveillance and response plan. It is anticipated that surveillance based on the pilot study will be implemented in the fall of 2003.

OMAF: Ontario conducts targeted surveillance for BSE. None of the 1300 samples that have been tested in the last 12 months have resulted in a positive test for BSE. It is expected that national regulatory policies regarding the ruminant to ruminant feed ban will be enhanced following the confirmation of one case of BSE in Alberta. These policies, coupled with increased market pressures, will likely create further barriers to the rendering of abattoir waste and deadstock of cattle origin and subsequent use of Meat and Bone Meal (MBM) in livestock rations. As a result, costs of deadstock collection are likely to rise.

In addition, added BSE surveillance requirements will necessitate sampling of cattle mortalities for animals older than 24 months that have died from causes other than slaughter. Centralized collection and testing of on-farm mortalities will be required. OMAF is looking at a number of options to encourage safe disposal and recycling of deadstock and provide added safeguards for on-farm disposal to ensure continued high standards of environmental protection.

OMAF is working with the Canadian Food Inspection Agency (CFIA) and Emergency Measures Ontario to finalize a Foreign Animal Disease annex to the Ontario Agri-Food Emergency Response Plan. This annex will delineate authorities and responsibilities should a foreign animal disease be detected in Ontario livestock or poultry. OMAF is currently working with MNR, MOHLTC, CFIA and Health Canada on an Ontario CWD strategy. The strategy will help to identify any existing gaps in our prevention, detection and control policies and recommend possible courses of action. Surveillance activities for CWD in both Ontario farmed and wild deer will continue to be enhanced over the course of the next several years.

The detection of one case of BSE in Alberta will necessitate a thorough review of existing federal and provincial regulatory powers to prevent, detect and control serious animal disease outbreaks such as BSE, FMD and CWD.

Seed Stock and Afforestation in Ontario

MNR: The Ontario Tree Seed Plant (OTSP) is operating under a business plan and funding model designed to ensure its continued operation. The OTSP maintains the provincial seed bank of native tree species and is working closely with other stakeholders to ensure that an adequate supply of genetically appropriate seed is maintained and available.

The OTSP is working closely with clients to encourage good seed stewardship and to ensure continued supply of zone appropriate or known source seed. The OTSP is currently rebuilding its inventory; however, due to the cyclic nature of tree seed crops this may take some time. The OTSP does have in place the tools to take advantage of the cycle of good seed crops as they occur.

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